PROFESSIONAL

Model CDR500 User Guide

CD Recorder/CD Player

marantz®

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

COMPACT disc Recordable ReWritable

ENGLISH

WARRANTY

Contact your local Marantz distributors for warranty information.

RETAIN YOUR RECEIPT AS PROOF OF PURCHASE

Your receipt is proof of a valuable purchase. Keep it in a safe place where you can easily find it for filing insurance claims when necessary or when corresponding with Marantz.

IMPORTANT

It is the responsibility of the consumer to establish proof of purchase when seeking servicing covered by the warranty. Your receipt or invoice is valid as such proof.

U.K. ONLY

This undertaking is in addition to a consumer's statutory rights and does not affect those rights in any way.

FRANÇAIS

GARANTIE

Veuillez contacter les revendeurs Marantz locaux pour de plus amples informations concernant la garantie.

CONSERVER LE TICKET DE CAISSE COMME PREUVE D'ACHAT

Le ticket de caisse représente la preuve d'un achat de valeur. Le conserver dans un endroit sûr, où il peut être retrouvé aisément, afin d'introduire les revendications éventuelles auprès des assurances ou auprès de Marantz, le cas échéant.

IMPORTANT

Il incombe au consommateur d'établir la preuve de son achat, à l'aide du ticket de caisse ou de la facture, lors de la demande d'interventions couvertes par la garantie.

DEUTSCH

GARANTIE

Wenden Sie sich bezüglich Informationen zur Garantie an Ihren örtlichen Marantz-Händler.

BEWAHREN SIE ALS KAUFNACHWEIS IHRE KAUFQUITTUNG AUF

Ihre Quittung bzw. Rechnung ist ein Beweis für Ihren wertvollen Kauf. Bewahren Sie diese an einem sicheren Ort auf, wo Sie sie im Fall eines Versicherungsschadens oder bei der Korrespondenz mit Marantz leicht wiederfinden können.

WICHTIG

Es liegt in der Verantwortung des Käufers, den Kaufnachweis zu liefern, wenn Garantiereparaturen in Anspruch genommen werden sollen. Ihre Quittung oder Rechnung dient als ein solcher Nachweis.

NEDERLANDS

GARANTIE

Neem contact op met de Marantz distributeurs in uw buurt voor informatie over de garantie.

BEWAAR UW REÇU ALS AANKOOPBEWIJS.

Uw reçu is het bewijs dat u een waardevol product heeft gekocht. Berg het veilig op, zodat u het snel terug kunt vinden als u een verzekeringsclaim moet indienen of voor uw correspondentie met Marantz.

BELANGRIJK

De klant is verantwoordelijk voor het tonen van een aankoopbewijs wanneer het apparaat onder garantie moet worden gerepareerd. Uw reçu of uw factuur is een geldig aankoopbewijs.

ESPAÑOL

GARANTÍA

Consulte a su distribuidor local de Marantz si desea más información sobre la garantía.

CONSERVE EL RECIBO COMO PRUEBA DE COMPRA

Su recibo constituye la prueba de compra. Guárdelo en un lugar seguro donde pueda hallarlo fácilmente en caso de que lo necesite para presentar una reclamación de garantía o mantener algún tipo de correspondencia con Marantz.

IMPORTANTE

Es responsabilidad del consumidor presentar la prueba de compra siempre que solicite alguna reparación cubierta por la garantía. La factura o el recibo son documentos válidos como prueba de compra.

ITALIANO

GARANZIA

Contattare i distributori Marantz della zona dell'utente per informazioni sulla garanzia.

CONSERVARE LA RICEVUTA COME PROVA D'ACQUISTO

La ricevuta comprova un acquisto di valore. Conservarla in un luogo sicuro e facilmente reperibile per intraprendere dei reclami, ove necessario, o quando ci si rivolga alla Marantz.

IMPORTANTE

L'utente ha la responsabilità di produrre una prova d'acquisto se vuole servirsi dell'assistenza coperta da garanzia. La ricevuta o la fattura è valida in questo senso.

PORTUGUÊS

GARANTIA

Para informações sobre a garantia, contacte o concessionário local Marantz.

GUARDE O TALÃO DE COMPRA COMO PROVA

O talão de compra é a prova de ter comprado qualquer coisa de valor. Guarde-o em lugar seguro, pois pode precisar dele para obter uma cobertura de seguro ou no âmbito de correspondência com Marantz.

IMPORTANTE

Para obter um serviço coberto pela garantia, o cliente deve apresentar a prova e a data da compra. O talão ou a factura constituem provas suficientes.

SVENSKA

GARANTI

Kontakta din lokala Marantz-distributör för information om garantin.

SPAR KVITTOT SOM INKÖPSBEVIS

Kvittot är ditt bevis för ett värdefullt inköp. Förvara det på en säker plats där du lätt kan hitta det för försäkringsfrågor eller korrespondens med Marantz.

VIKTIGT

Kunden ansvarar för att uppvisa inköpsbevis när service begärs som täcks av garantin. Ditt kvitto eller faktura är ett giltigt inköpsbevis.

CDR500N i-iii (E) 1 9/7/00, 5:11 PM

CE MARKING

English
The unit is in conforms with the EMC directive and low-voltage directive.

Français
Cet appareil est conforme à la directive EMC et à la directive sur les basses tensions.

Deutsch
Dieses Greät entspricht den EMC-Richtlinien und den Richtlinien für Niederspannungsgeräte.

Nederlands
Dit apparaat voldoet aan de EMC-richtlijn en de richtlijn voor apparatuur met laag voltage.

Español
Esta unidad estáde acuerdo con las EMC y las relacionadas con baja tensión.

Italiano
Quest' unitá è conforme alle direttiva EMC ed alla direttiva sulle basse tensioni.

Português
Esta unidade está em conformidade com as directivas EMC e as directivas de baixa voltagem.

Svenska
Denna enhet överrensstämmer med EMC direktivet och direktivet för lågspänning.

SI DICHIARA CHE L'APPARECCHIO SINTO-AMPLIFICATORE SR-39 RISPONDE ALLE PRESCRIZONI DELL' ART.2 COMMA 1 DEL D.M. 28 AGOSTO 1995 N° 548.

FATTO A EINDHOVEN, IL 1/1/1977

MARANTZ EUROPE B.V.
Po Box 80002
5600 JB EINDHOVEN
THE NETHERLANDS

Este aparato lleva elementos antiparasitarios necesarios para cumplir con los limites que se estableren en el Anexo V del Reglamento sobre Pertubaciones Radioelectricas e Interferencias aprobado en el Real Decreto 138/1989. (B.O.E. de 9 de Febrero 1989)

WARNINGS FOR LASER RADIATION

CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

DANGER: INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.

VARO!: AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINANAKYMÄTTÖMÄALLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

VARNING!: OSYNLIG LASERSTÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRALEN.

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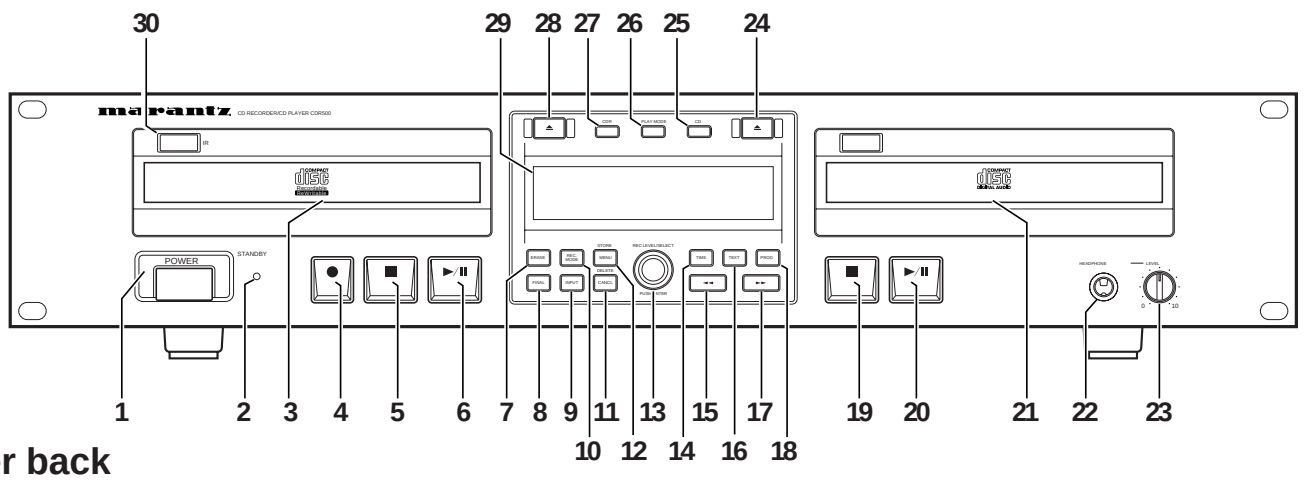
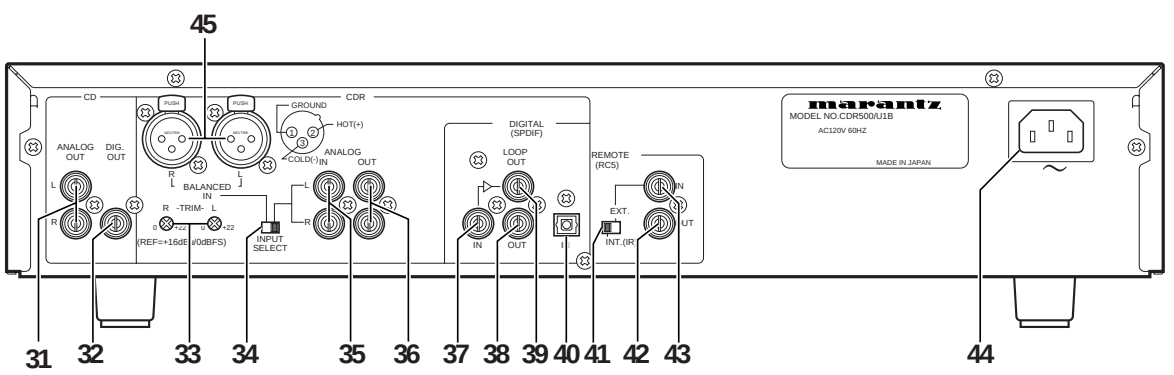
CONTROLS AND CONNECTIONS

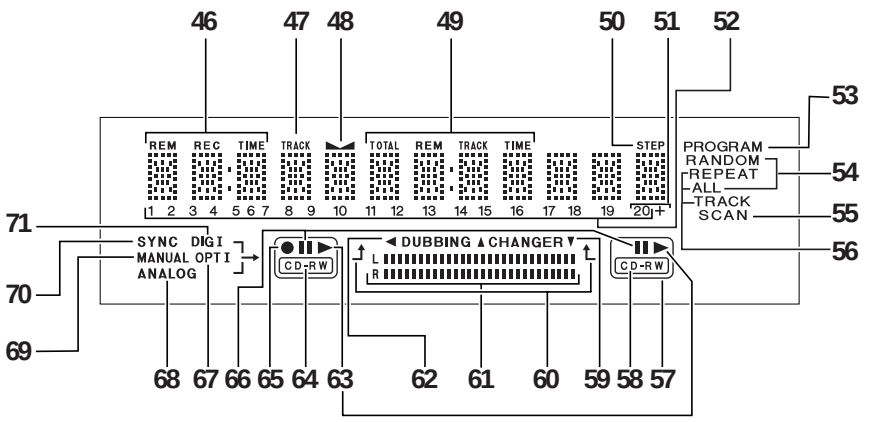
Player front



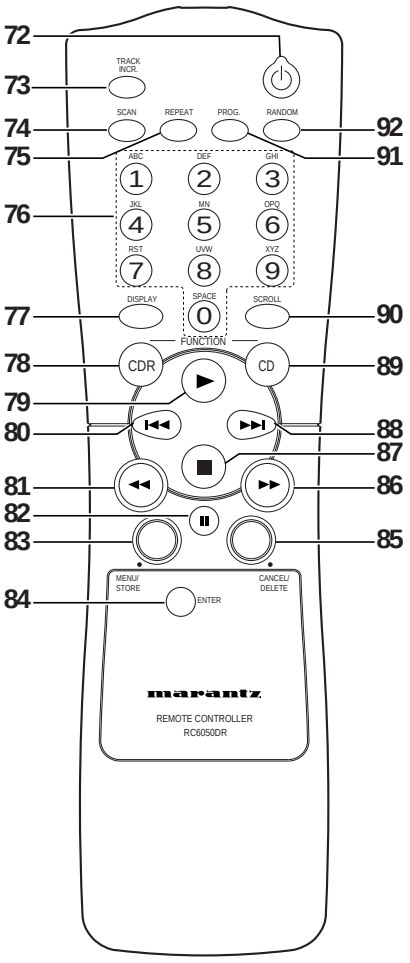
Player back



Display



Remote control



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INTRODUCTION

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Foreword

This section must be read carefully before any connection is made to the mains supply.

WARNINGS

Do not expose the equipment to rain or moisture.

Do not remove the cover from the equipment.

Do not insert anything into the equipment through the ventilation holes.

Do not handle the mains lead with wet hands.

CE marking (only EU version)

CE This product is in conformity with the EMC directive and low-voltage directive.

Equipment mains working system

Your Marantz product complies with the household power and safety requirements in your area.

IMPORTANT: (FOR U.K. version only)

This apparatus is fitted with an approved moulded 13 Amp plug. To change a fuse in this type of plug proceed as follows:

1. Remove fuse cover and fuse.
2. Fix new fuse which should be a BS1362 5A, A.S.T.A. or BSI approved type.
3. Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place.
If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

Note:

The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13A socket elsewhere.

HOW TO CONNECT A PLUG

The wires in this mains lead are coloured in accordance with the following core:

GREEN–and–YELLOW—"EARTH" ("E")

BLUE—"NEUTRAL" ("N")

BROWN—"LIVE" ("L")

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

1. The wire which is coloured green-and yellow must be connected to the terminal in the plug which is marked with the letter "E" or by the earth symbol ⏚ or coloured green or green-and-yellow.
2. The wire which is coloured blue must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
3. The wire which is coloured brown must be connected to the terminal which is marked with the letter "L" or coloured RED.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead — not simply over the three wires.

Copyright

Recording and playback of some material may require permission. For further information refer to the following:

- Copyright Act 1956
- Dramatic and Musical Performers Act 1958
- Performers Protection Acts 1963 and 1972
- Any subsequent statutory enactments and orders

Congratulations on the acquisition of your CD-Recorder. This CD-Recorder now enables you to record, play and erase your own audio Compact Discs. Naturally the recorder can also be used to play all pre-recorded CDs.

With the exception of legal restrictions pertaining to copying, you can now create your own high-quality audio recordings on CD. The discs used to record must bear the logos shown below.

There are four types of CD Recordable discs:
CD-R(W) discs have a compatibility to play/record on the CD-Recorders based on the ORANGE BOOK Part II/III, depending on the combinations of the discs and CD-Recorders, the discs might not be able to be played/recorded properly.

1 CD Recordable Disc (record once):

Fully recorded and subsequently finalized CD-R discs can be played on CD players and recorders that are suitable for CD-R discs. CD-R discs can be recognized by the following logos:

COMPACT disc DIGITAL AUDIO Recordable

COMPACT disc Recordable

2 CD ReWritable Disc (multiple recording):

Recorded and finalized CD-RW discs can be played on CD players and recorders that are suitable for CD-RW discs. CD-RW discs can be recognized by the following logos:

COMPACT disc DIGITAL AUDIO ReWritable

COMPACT disc ReWritable

Once you start using the recorder, you will discover how easy it is to 'make' your own CDs. Nevertheless, we recommend that you use an erasable (CD-RW) digital audio disc on your first attempt, while following the instructions given here.

Attention!

It is forbidden to copy material protected by copyright, including computer programs, films, television and audio recordings. This appliance may not be used for applications of this type.

Note:

Some CD players can not play the finalized CD-R(W) discs because of the low reflectivity of such discs.

Because of laser power differences, some DVD players cannot play the finalized CD-R(W) discs.

Read the text carefully and keep the instructions close at hand so that you can refer to them if necessary.

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INTRODUCTION

Unpacking

First check the contents of the packaging. It should contain the following:

- CD-Recorder CDR500
- Remote control with batteries packaged separately
- Power cord
- Instructions

If one of these components is missing, please inform your supplier immediately. Save the packaging material; it may come in handy if you move the appliance.

Setup

- Place the recorder on a strong, vibration-free surface.
- Do not use the recorder under extremely damp conditions.
- If the recorder is placed in a cabinet, make sure that a 2.5 cm space remains free on all sides of the recorder for proper ventilation.

Attention!

If the appliance is not used or operated in accordance with the instructions, this may result in exposure to dangerous radiation or other risks.

Only authorized technicians are allowed to open the appliance casing or to perform repairs or maintenance.

Compact discs

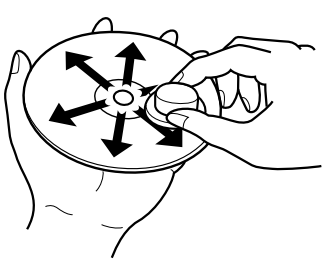
Handle discs carefully so as not to damage or scratch the front side.

To protect the disc, avoid placing it in the following locations:

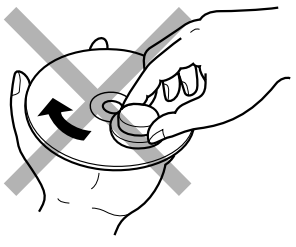
- In direct sunlight or near a source of heat like a heater.
- In a place which is damp or dirty.
- In a place which could be exposed to rain, such as near a window.

Always keep the disc surface clean.

Up to six billion data units are recorded on the front side of the disc. When cleaning the disc surface, always be sure to use a special compact disc cleaner and wipe as shown below.

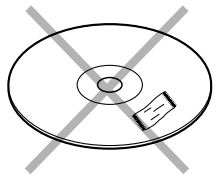


Wipe in a radial direction.



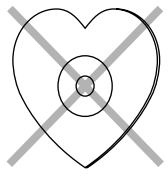
Do not wipe in circumferential direction.

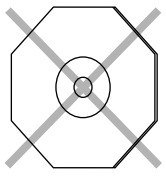
- Do not use conventional record cleaner for analog records, as this will adversely affect the disc surface.
  Store discs properly by placing them in their disc cases.
- Do not attach a piece of paper or sticker on the label side of disc. It may come off or create an unbalance, which can cause malfunctioning or defects.



- Write only on the printed side of a CD-R or CD-RW, and only with a soft felt-tipped pen.
- Do not use a disc with a special shape.

  Do not attempt to play a disc with a special shape such as a heart-shaped disc or octagonal disc. Otherwise the equipment malfunction may result.

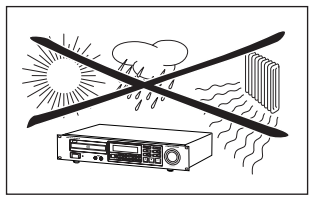




Maintenance

Clean the CD-Recorder with a soft, slightly dampened lint-free cloth. Do not use any cleaning agents as they may have a corrosive effect.

Do not expose the CD-Recorder or CDs to humidity, rain, sand or excessive heat (caused by heating equipment or direct sunlight).



If the CD-Recorder cannot read CDs correctly use a commonly available cleaning CD to clean the lens before taking the CD player to be repaired. Other cleaning methods may destroy the lens. Always keep the tray closed to avoid dust on the lens.

The lenses may cloud over when the CD-Recorder is suddenly moved from cold to warm surroundings. It is not possible to play a CD then. Leave the CD-Recorder in a warm environment until the moisture evaporates.

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CONTROLS AND CONNECTIONS

Controls on the front

CD-Recorder

(1) **POWER ON/OFF** ..... turns the CD-Recorder ON and OFF
(2) **Standby indicator**
(3) **Disc tray (Deck1)** ..... records CD-R(W) and plays CD and CD-R(W)
(4) ● ..... starts recording, finalizing, erasing
(5) ■ ..... stops/clears a program
(6) ▶/II ..... starts play/interrupts play or recording
(7) **ERASE** ..... selects erasing mode
(8) **FINALIZE** ..... selects finalize mode
(9) **INPUT** ..... selects external input source
(10) **REC MODE** ..... selects recording modes
(27) **CDR** ..... selects CDR display/keys (left side)
(28) ▲ ..... opens/closes disc tray

General

(11) **CANCL/DELETE** ..... - deletes tracks from a program
- deletes text in Menu mode
- returns to a higher level in the menu

(12) **STORE/MENU** ..... - enters Menu mode
- stores Menu settings

(13) **REC LEVEL/SELECT** .... - previous/next track (Play and Program mode)
- recording level control (recording)
- selects settings (menu on)

PUSH/ENTER ..... - plays selected tracks
(push) ..... - selects settings in Menu mode
- programs track numbers

(14) **TIME** ..... selects display information/text
(15) ◄◄ ..... - searches backward
- cursor control in Menu/Prog. review mode

(16) **TEXT** ..... activate scrolling of text over the display (once)
(17) ►► ..... - searches forward
- cursor control in Menu/Prog. review mode

(18) **PROG. (program)** ..... opens/closes program memory
(22) **PHONES** ..... socket for headphones
(23) **LEVEL** ..... adjusts the headphones volume
(26) **PLAY MODE** ..... Selects between Changer mode and Dual mode
(29) **Display** ..... information screen
(30) **IR Sensor**

CD player

(19) ■ ..... stops/clears a program
(20) ▶/II ..... starts play/interrupts play
(21) **Disc tray (Deck2)** ..... plays CD and CD-R(W)
(24) ▲ ..... opens/closes disc tray
(25) **CD** ..... selects CD display/keys

Note:

- When provided on the remote control, you can also use the corresponding buttons.
- Some buttons are only on the remote control.

Connections at the back

(31) **ANALOG OUTPUT CD** .. connects CD player deck to the line input of an analog input device (left and right)
(32) **DIGITAL OUTPUT CD** ... connects CD player deck to the digital coaxial input of e.g. amplifier or recording device
(33) **TRIM** ..... adjust the BALANCED input level
(34) **INPUT SELECT** ..... selects the input BALANCED IN or ANALOG IN
(35) **ANALOG IN** ..... connects to the line output of an analog source (left and right)
(36) **ANALOG OUT** ..... connects to the line input of an analog input device (left and right)
(37) **DIGITAL (SPDIF) IN** ..... connects to the digital coaxial output of an external digital source
(38) **DIGITAL (SPDIF) OUT** .... connects to the digital coaxial input of e.g. another digital device
(39) **DIGITAL (SPDIF) LOOP OUT** ..... connects to the digital coaxial input of e.g. amplifier or recording device
(40) **DIGITAL (SPDIF) OPT INPUT** ..... connects to the digital optical out put of an external digital source
(41) **REMOTE CONTROL SWITCH**
(42) **REMOTE CONTROL OUT** ..... connects to a remote control input
(43) **REMOTE CONTROL IN** .... connects to a remote control output
(44) **Connection to mains**
(45) **BALANCED IN** ..... connects to the balanced output of an analog source (left and right)

DISPLAY indications

(46) **REM/REC TIME** ..... remaining recording time / recording time
(47) **TRACK** ..... track number
(48) ▙▟ ..... balance (lights during balance adjustment)
(49) **TOTAL REM TRACK TIME** ..... total or remaining time of disc or track
(50) **STEP** ..... indicates the number of tracks in a program
(51) **20 +** ..... disc or program contains more than 20 tracks
(52) **Track Number** ..... tracks on a disc or in a program track in play
(53) **PROGRAM** ..... flashes during programming/ lights in program mode
(54) **RANDOM ALL** ..... plays tracks in random order
(55) **SCAN** ..... lights up when the first 10 seconds of each track are played.
(56) **REPEAT TRACK/ALL** ... lights up when a track/ complete disc (or program) is repeated.
(57) □ ..... CD player selected
(58) **CD** ..... CD inserted (a pre-recorded CD or finalized CD-R or CD-RW disc)
(59) ▲CHANGER▼ ..... changer mode selected
(60) ⇂↿ ..... dual mode selected
(61) **L/R** ..... record/play level bar. Indicates the audio signal level.
(62) ◄ **DUBBING** ..... lights during recording from the internal CD
(63) ▶ ..... lights during play
(64) **R (W)** ..... unfinalized CD-R(W) disc inserted

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(65) ● ..... lights during recording
(66) **II** ..... pause function active
(67) **OPT I→** ..... optical input I selected for external recording
(68) **ANALOG** ..... analog input selected for external recording
(69) **MANUAL** ..... lights up when auto track mode is turned off
(70) **SYNC** ..... automatic or synchronized start of external recording
(71) **DIG I** ..... digital input I selected for external recording

REMOTE CONTROL

Remote control commands

(72) **STANDBY** ⏻ ..... switches Standby On/Off
(73) **TRACK INCR. (ement)** .. increases track numbers during recording
(74) **SCAN** ..... plays the first 10 seconds of each track
(75) **REPEAT** ..... repeat play(All, program or track)
(76) **Number/alphabet keys 0 - 9** .. - selects a track by number
- selects character for text input
(77) **DISPLAY** ..... selects display information/text
(78) **CDR** ..... selects CD-Recorder
(79) ▶ ..... starts CD-R(W) play
(80) |◀◀ ..... previous track (Play and Program mode)
(81) ◀◀ ..... - searches backward
- cursor control in Menu/Prog. review mode
(82) **II** ..... pauses CD-R(W) play/recording
(83) **MENU/STORE** ..... - enters Menu mode
- stores Menu settings
(84) **ENTER** ..... - selects settings in Menu mode
- programs track numbers
- starts playback of selected track
(85) **CANCEL/DELETE** ..... - deletes tracks from a program
- deletes text in Menu mode
- returns to a higher level in the menu
(86) ▶▶ ..... - searches forward
- cursor control in Menu/Prog. review mode
(87) ■ ..... stops CD-R(W) and clears a program
(88) ▶▶| ..... next track (Play and Program mode)
(89) **CD** ..... selects CD player
(90) **SCROLL** ..... activates scrolling of text over the display
(91) **PROG. (program)** ..... opens/closes program memory
(92) **RANDOM** ..... plays CD-R(W) or program in random order

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INSTALLATION

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The numbers between parentheses refer to the fold-out.

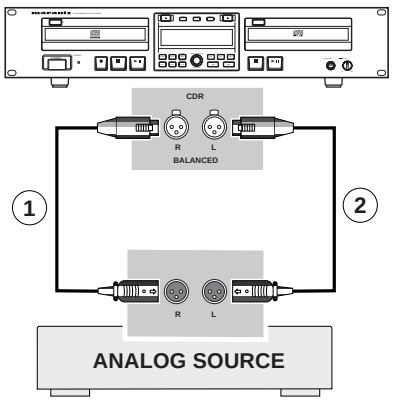
This CD-Recorder can be used to record directly or through a (pre-) amplifier from any digital or analog audio source.
In addition, the appliance can be used as a regular CD player.
Read how to connect the CD-Recorder based on the possibilities your other audio equipment offers.
Please refer to the operating instructions for your other audio equipment first.

The following options are available:

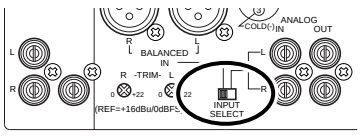
- Balanced analog connections
- Unbalanced analog connections
- Digital SPDIF connections
- Digital Optical connections
- Digital cascade connections

Balanced analog connections

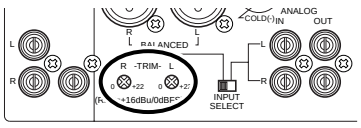
1 **For recording, connect the analog balanced cable** from **the CD-Recorder to a source based on the diagram below:**



2 **Set *INPUT SELECT* switch (34)** to **BALANCED IN**.



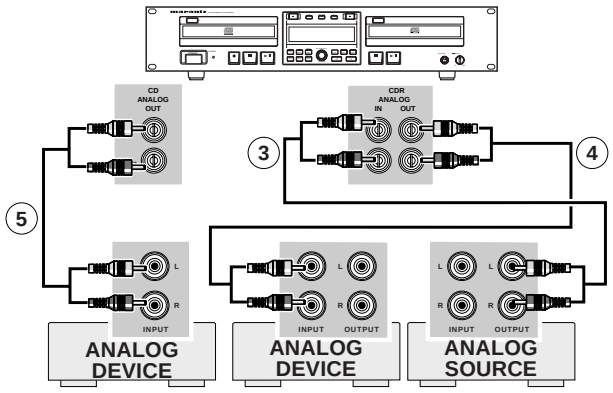
When this CD-Recorder is shipped, it is already set to +16dBu/0dBFS at the MAX-REC-LEVEL. If you want to change the level, rotate ***TRIM*** control (33) to adjust input level for both L and R.



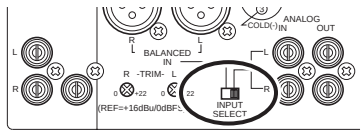
Note:
Use the digital output for exact calibration in combination with a digital signal analyzer.

Unbalanced analog connections

1 **For recording and playing, connect the CD-Recorder to other equipment based on the diagram below**:



2 **Select *INPUT SELECT* switch (34)** to **ANALOG L/R (RCA)**.



3 **For DUAL-Mode playback** (See page 17), connect cable (5) between the **ANALOG CD OUTPUT-sockets on the CD-Recorder** and the **ANALOG INPUT sockets of an amplifier e.g. TAPE IN, CD or AUX**.

- **DUAL-Mode playback is the function that the deck 1 and the deck 2 on this CD-Recorder can play the songs separately at the same time.**

Note:
Never use the PHONO input.

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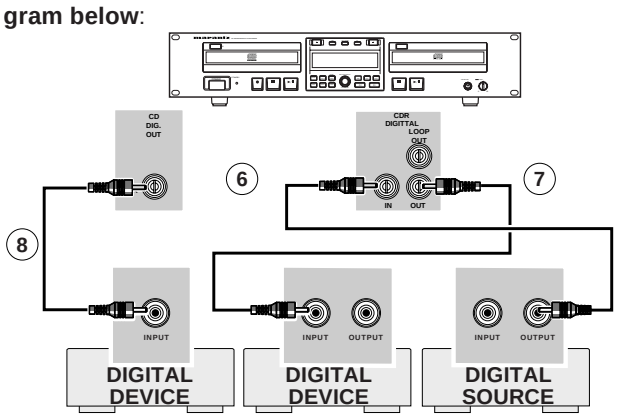
INSTALLATION

The numbers between parentheses refer to the fold-out.

Digital SPDIF connections

1 **For recording and playing, connect coaxial cables** from **the CD-Recorder to digital equipment based on the diagram below**:



2 **For DUAL-Mode playback** (See page 17), connect cable ⑧ between the **DIGITAL CD OUTPUT-socket on the CD-Recorder** and **the DIGITAL INPUT-socket of DIGTAL DEVICE**.

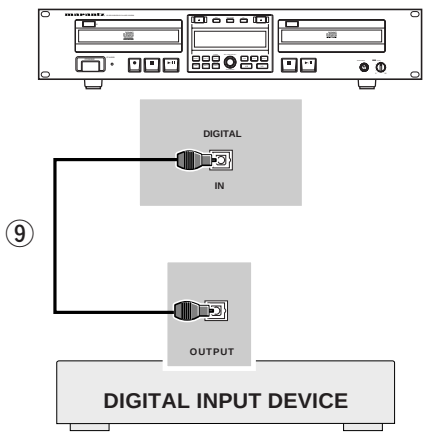
- **DUAL-Mode playback is the function that the deck 1 and the deck 2 on this CD-Recorder can play the songs separately at the same time.**

Note:

You can also connect the LOOP OUT socket on this CD-Recorder to the input sockets of DIGTAL DEVICE when DIGITAL (SPDIF) IN is used.

Digital Optical connections

1 **For recording, connect the fiber-optic cable** from **the CD-Recorder to a digital device based on the diagram below**.



Note:

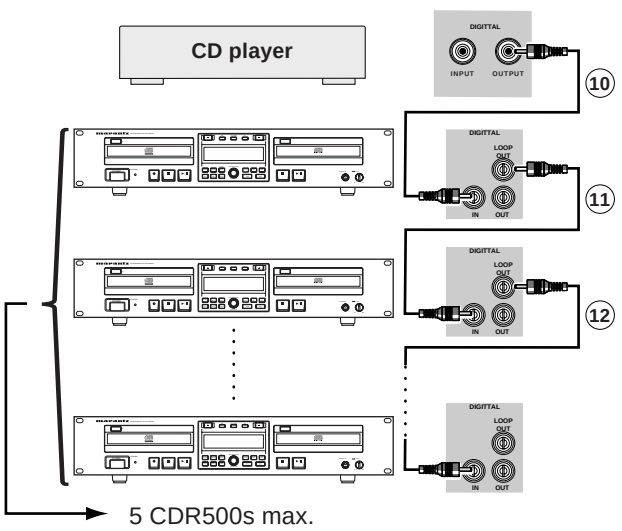
Before connecting the cables, remove the dust caps from the digital optical connections. We recommend that you save the caps.

Digital cascade connections

1 For cascade recording, **connect** a CD player **from the digital out socket to CDR DIGITAL IN socket** on the CDR500 recorder using able ⑩.

2 **Connect** the CDR500 recorder **from CDR DIGITAL LOOP OUT socket to CDR DIGITAL IN socket** on another CDR500 recorder using cable ⑪.

3 Connect the CDR500 recorder using the cable ⑫ in the same way. **Cascade connections of this CD-Recorder are possible up to 5 stages.**



Note:

Cascade connection is useful when you make a several copies from an original source since the being the recording signal is directly go through LOOP OUT from INPUT on this CD-Recorder. Cascade connections of this CD-Recorder are possible up to 5 stages.

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RC5 (D-BUS) CONNECTION

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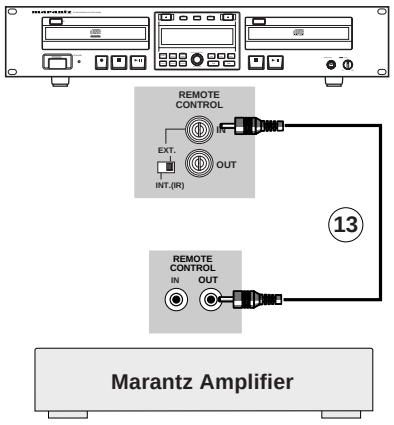
The numbers between parentheses refer to the fold-out.

Remote control cable connections

By connecting CDR500 to the Marantz amplifier using a RC5 (D-BUS) remote control cable (13), you can operate the operations of CDR500 from the remote control of the amplifier. **Set the remote control selector to 'EXTERNAL'.**



Note:

When you don't use the RC5 (D-BUS) connection, ALWAYS set the remote control selector to 'INTERNAL'.

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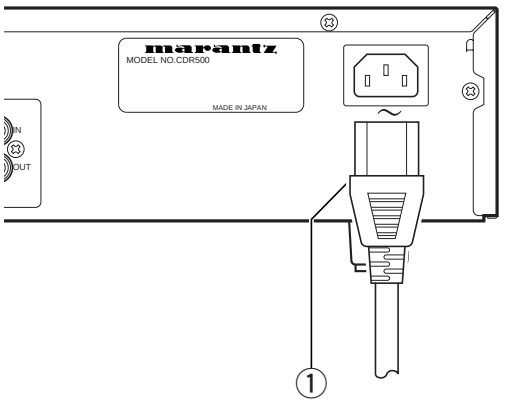
USING THE RECORDER

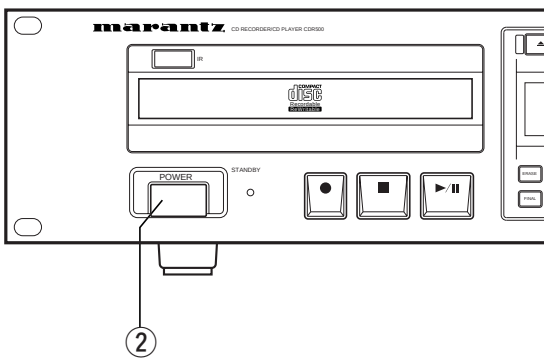
The numbers between parentheses refer to the fold-out.

Switching ON and OFF

1 Plug the power cord supplied into the MAINS connector on the CD-Recorder, then into a mains socket.



2 Press the *POWER* (1) button on the front of the CD-Recorder to turn it on or off.

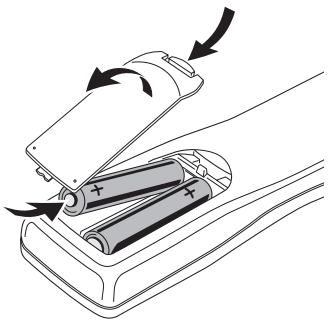


Using the remote control

1 Open the battery compartment cover.

2 Insert 2 batteries (AA, LR-6 or UM-3; as supplied) as shown.

3 Replace the cover.



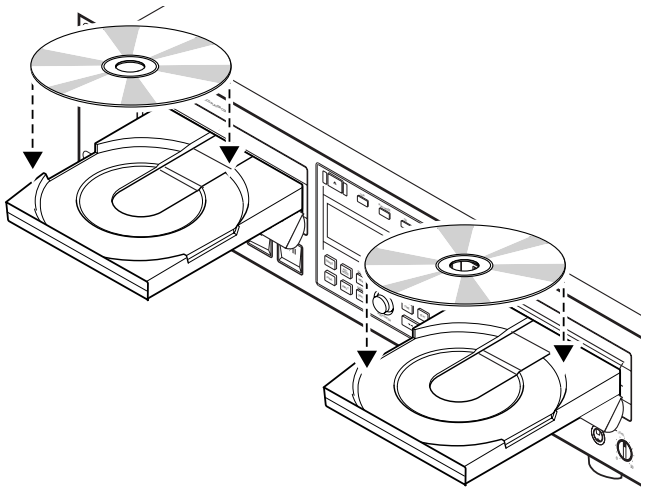
Note:

- We recommend you use **2 batteries of the same type and condition**.
- Always **point the remote control directly towards the recorder** when operating via the remote control.

This remote control can switch “STANDBY ON/OFF” but cannot switch “POWER ON/OFF” the CD-Recorder.

Batteries contain chemical substances, so they should be disposed properly.

Inserting discs



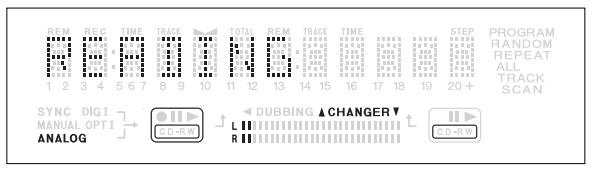
1 Press ▲ (28) to open the disc tray.

➔ OPEN lights up.

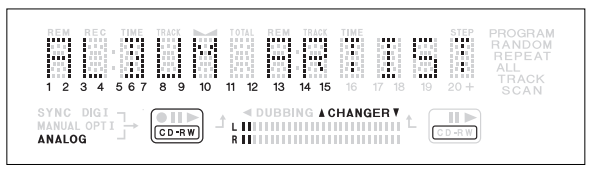
2 Insert a CD, CD-R or CD-RW in the appropriate recess in the tray, label side up.

3 Press ▲ (28) to close the tray.

➔ CLOSE lights up, followed by READING and the display will show the type of disc you inserted.



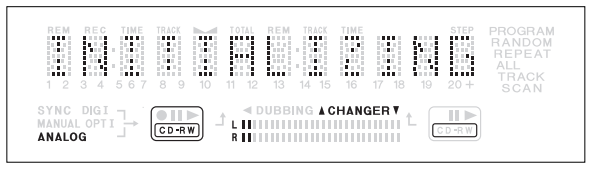
- If a CD-R(W) is finalized it will show CD on the display.
- If CD-text is available the TITLE/ARTIST will scroll by.



Note:

CD-Recorder deck only

- For recording it is important that the blank disc is completely free from dust particles or scratches. (see Compact Discs page 2).
- If you insert a blank or partly-recorded CD-R(W) or unfinalized CD-R(W), the CD-Recorder will calibrate the disc for optimum recording. During this process the display will first show INITIALIZING and then the number of audio tracks. Calibration can take up to 30 seconds.



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RECORDING

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The numbers between parentheses refer to the fold-out.

Remarks about recording

You will soon discover how easy it is to make your own CDs. Nevertheless, it is advisable to use a CD-RW disc for your first try.

- **If the disc is a CD-RW and is already finalized you must unfinalize it first.**
- The recording procedure is the same for CD-Rs and CD-RWs.
- If the disc already contains recordings, the CD-Recorder will automatically search for the end of the last track, so that recording can start from there.
- **There must be at least 7 seconds of recording time left on the disc**, otherwise you will not be able to enter record standby mode. DOES NOT FIT then lights up.
- A maximum of 99 tracks can be recorded on a disc. Minimum allowable track length is 4 seconds.
- Recordings from DAT or DCC players will not always stop automatically.
- SRC (Sample Rate Conversion)
  This CD-Recorder can perform Sample Rate Conversion on the incoming signal, it is capable of handling sources, rating from 11 kHz up to 56 kHz.
  If no 44.1 kHz (± 100 PPM) source is connected, this CD-Recorder will automatically switch to SRC function.

Important:

If you want to play the recorded CD-R disc on any regular CD player, it must first be finalized. (See FINALIZING/ UNFINALIZING page 15.)

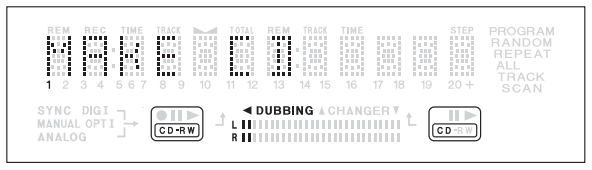
Finalized CD-RW discs play only on CD-RW compatible CD players.

Recording modes

Your recorder offers several recording modes.

For recording from internal CD-deck:

- RECORD FAST (double speed recording) - fast recording of a disc or programmed tracks.
- REC LISTEN (normal speed recording) - listening to a recording while making it.
- MAKE CD (double speed recording and auto-finalize) - fast recording of a disc or programmed tracks. Recording will be finalized automatically.
- DISC AT ONCE (normal speed recording) - the recording is from the Lead-in to the Lead-out without interruption.



Warning:

No more recording possible after finalizing CDR disc!

For recording from external sources:

- REC EXT DISC (CD-SYNC recording) - to make an automatic recording of an external source simply by starting the source.
- REC EXT MAN (manual start recording) - to start a manual recording from an external source.

Some remarks on recording:

- When **Auto track is on** (default setting), **track numbers will automatically be increased during recording**.
- By programming tracks first, a compilation can be recorded.
- If a finalized CD recordable disc is inserted in the CD-Recorder, FINALIZED CD will be displayed. **Recording is not possible**.
- If a finalized CD rewritable disc is inserted in the CD-Recorder, UNFINALIZE and PRESS ENTER will be displayed when the *REC MODE* (10) is pressed. If *PUSH ENTER* (13) is pressed, the disc will be unfinalized.
- This CD-Recorder can record about 17 seconds of a pause time If you record a track including more than 17-seconds-pause time by digital recording, the pause time will be recorded the different length of time from original. However, the entire track time will not be changed and be able to listen to the music as same as original.
- When you copy a special disc such as HDCD or DTS, you have to
  - set the sampling frequency to 44.1kHz (± 100PPM).
  - use a digital connection.
  - set the digital rec-volume to 0 dB.
- When you copy the tracks from a DAT recorder by different sampling frequencies, noise might be recorded in the disc. Please set a sampling frequency for every track in a DAT.

Warning:

No more recording possible after finalizing CD-R disc!

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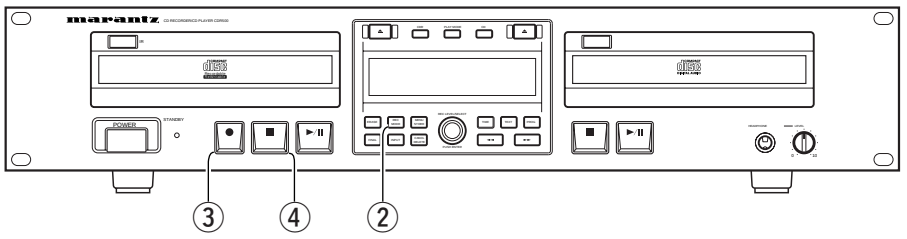
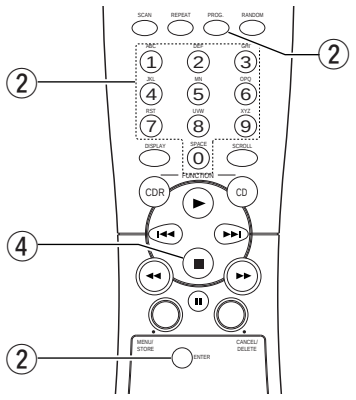
RECORDING (FROM INTERNAL CD-DECK)

The numbers between parentheses refer to the fold-out.





Double speed recording

Using internal CD player.

- During double speed recording the sound is not audible.

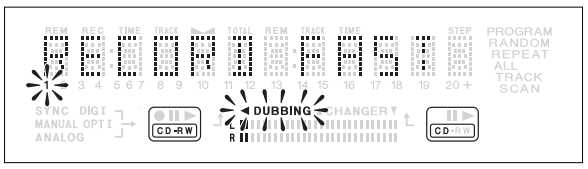
① **Make sure that the recording disc is absolutely free of scratches and dust particles.**

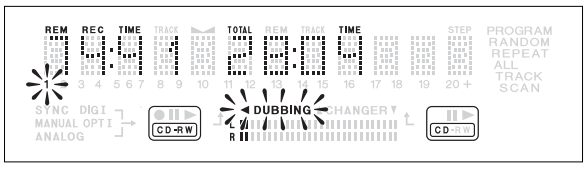
② **To choose the type of recording, press *REC MODE* (10).**

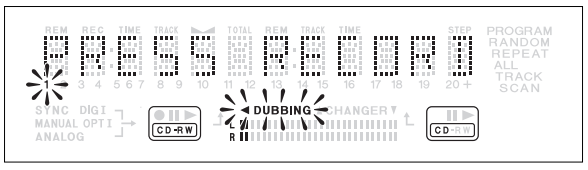
once: to select RECORD FAST if you wish to make a fast recording of a disc or programmed tracks.

three times: to select MAKE CD if you wish to make a fast recording of a disc or programmed tracks and to automatically finalize the recording. Also see 'FINALIZING CD-R & CD-RW' discs on page 15.

The ◄ **DUBBING** label starts blinking. After 3 seconds the display shows the remaining CD-R(W) recording time on the left and total time of source on the right. (every 2 seconds PRESS RECORD is displayed.) Both selection indicators are lit.







- **Press *PROG* (18,91) on the remote control to select one or more tracks for recording (see PROGRAMMING):**
  - rotate the *REC/LEVEL SELECT* (13) key to the required track number, then press *PUSH ENTER* (13).

or:

  - directly select the track number via the *10-keypad* (76) on the remote control, then press *ENTER* (84).

③ **To start recording press ● (4).**

➔ The display shows the real remaining time for the selected recording. High speed recording starts.
◄ **DUBBING** lights continuously.

- To check the elapsed recording time, press *TIME* (14) or *DISPLAY* (77). This can be done during recording.
- Recording will stop automatically.

④ **To stop recording manually, press ■ *STOP* (5, 87).**

➔ ◄ **DUBBING** goes out and recording stops.

- If ■ *STOP* (5, 87) was pressed within 3 seconds after ● (4), no recording will take place.
- After recording, the display shows UPDATE for several seconds. The Total time indications can differ slightly. However, no music information is lost.

Note:

- In this Recording mode, the Pause function is not operative.

Important:

If you want to play the recorded CD-R(W) disc on any regular CD player, it must first be finalized. (See FINALIZING/ UNFINALIZNG page 15).

The recorded sound might be distorted when you adjust the recording level to set above 0dB for digital recording and -12dB for analog recording. The default setting of recvolume for digital is 0dB and analog is -12dB when this CD-Recorder is shipped.

Finalized CD-RW discs play only on CD-RW compatible CD players.

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RECORDING (FROM INTERNAL CD-DECK)

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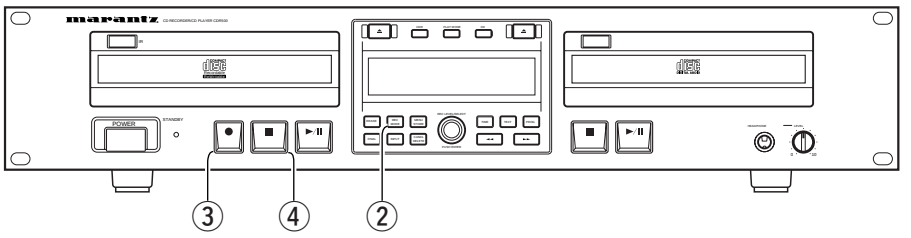
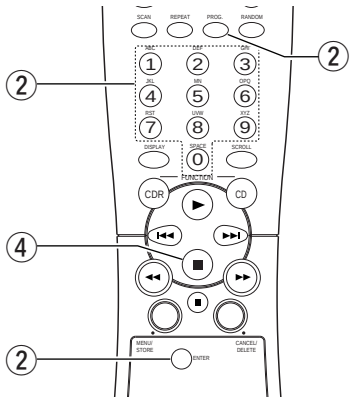
The numbers between parentheses refer to the fold-out.





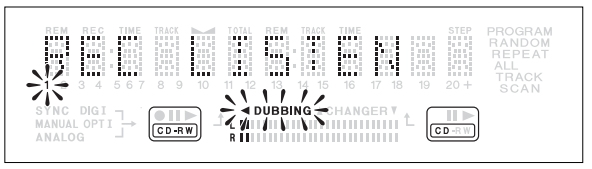
Normal speed recording

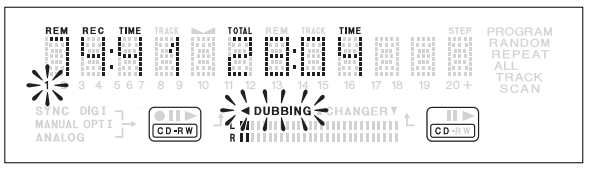
Using the internal CD player.
During the normal speed recording, you can listen to the recording while you are making it.

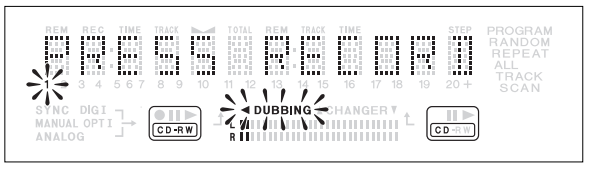
① **Make sure that the recording disc is absolutely free of scratches and dust particles.**

② **For recording, press *REC MODE* (10) twice.**

- The ◄ **DUBBING** label starts blinking. After 3 seconds the display shows the remaining CD-R(W) recording time on the left and total time of source on the right. (every 2 seconds PRESS RECORD is displayed) Both selection indicators are lit.







- Press *PROG* (18,91) on the remote control to select one or more tracks for recording (see PROGRAMMING page 19):
  - rotate the *REC LEVEL/SELECT* (13) key to the required track number, then press *PUSH ENTER* (13).

or:

  - directly select the track number via the *10-keypad* (76) on the remote control, then press *ENTER* (84).

③ **To start recording, press ● (4).**
→ ◄ **DUBBING** lights continuously and the selected track or program is copied at normal speed. The recording time left will appear.

- To check the elapsed recording time, press *TIME* (14) or *DISPLAY* (77) on the remote control. This can be done during recording.
- Recording will stop automatically.

④ **To stop recording, press ■ (5, 87).**
→ ◄ **DUBBING** goes out and recording stops.

- If ■ *STOP* (5, 87) was pressed within 3 seconds after ● (4), no recording will take place.
- After recording, the display shows UPDATE for several seconds. The Total time indications can differ slightly. However, no music information is lost.

Note:
In this recording mode, the Pause function is not operative.

Important:
If you want to play the recorded CDR disc on any regular CD player, it must first be finalized. (See FINALIZING/ UNFINALIZING page 15.)

The recorded sound might be distorted when you adjust the recording level to set above 0dB for digital recording and -12dB for analog recording. The default setting of recvolume for digital is 0dB and analog is -12dB when this CD-Recorder is shipped.

Finalized CD-RW discs play only on CD-RW compatible CD players.

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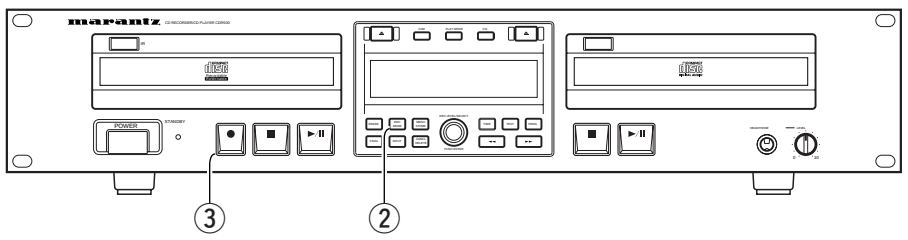
ENGLISH

RECORDING (FROM INTERNAL CD-DECK)

The numbers between parentheses refer to the fold-out.



DAO (Disc At Once) recording

A Disc At Once (DAO) recording is a recording of a complete disc in one run, from the Lead-in to the Lead-out without interruption. The laser does not stop writing within the process. This avoids the appearance of the so called Orange Book Linking Points which are created each time a new recording is started in a normal CD Recording process (Track At Once (TAO) recording).
A Linking Point on a CDR disc, is a small area where the data is corrupt due to a discontinuity in the data pattern. The discontinuity is caused by an interrupted laser writing process.
In the CD Red Book specification (the specification for printed CD's from a Glass Master) Linking Points are not permitted due to the high local Block Error Rate (BLER). CD pressing plants will be able to cut a Glass Master directly from a Disc At Once recorded CDR.
In the Orange Book Specification, which is valid for CDR, linking points are permitted, as most CD Players will be able to continue reading, while muting the signal at the linking point. For this reason an Orange Book Disc (a CDR) is Red Book Compatible.

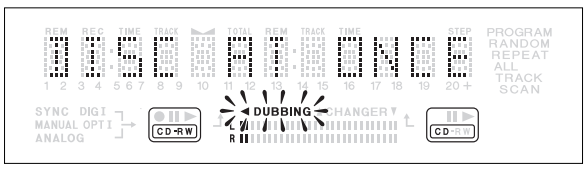
As a Disc At Once Recording starts recording at the Lead-in (TOC) and ends at the Lead-out, the finalisation of the recording is part of the Disc At Once Process. Separate finalising is not applicable to a Disc At Once Recording and therefore not needed.

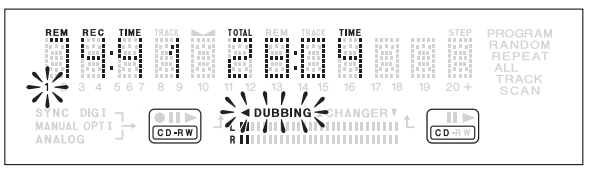
Putting a Track At Once recorded CDR (Finalised) in the CD section of the CDR500, will result in a Disk At Once Disk after the Disc At Once recording has been finished. The CDR500 will restore all the linking points present in the source disc while recording in DAO mode.
The source disk must comply to the Orange Book Specification, to create a proper DAO disc.

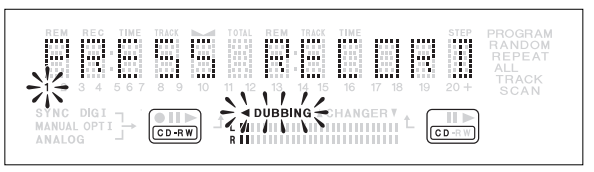
① Make sure that the recording disc is absolutely free of scratches and dust particles.

② For recording, press *REC MODE* (10) repeatedly until the DAO appears on the display .

- The ◄ **DUBBING** starts blinking. After 3 seconds, the the remaining CD-R/RW recording time, total time of CD disc, and PRESS RECORD will be shown continuously on the display.







③ To start recording, press ● (4).

➔ The total remain time of recording appears on the display. It starts recording.
◄ **DUBBING** lights continuously.

④ To stop recording, once The DAO recording is started, you cannot stop recording. Any key operation not accepted during the DAO recording.

Important:

If the source disk is not finalised, DAO recording is not possible

During DAO recording the Orange Book PMA area will not be transferred to the DAO disc.

DAO recording is possible on a CDRW disk, but it should be avoided. After DAO recording on a CDRW disk, the CDRW disk can be unfinalised normally (like it is a TAO recorded CDRW disk), however, due to the absence of the PMA area, the disc will be completely erased and its contents are lost!

Note:

The DAO recording cannot be recorded correctly if the CD disc has scratches or dust particles because this reads and copies the TOC and CD sub-code information from the CD disc directly.

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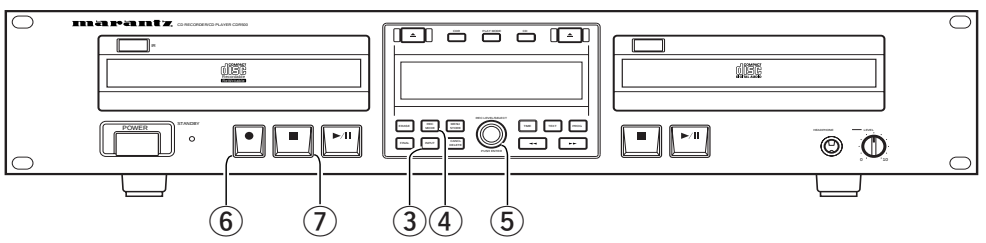
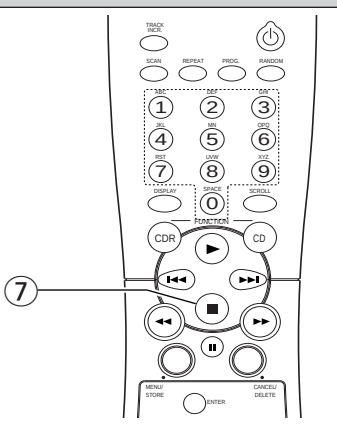
RECORDING

ENGLISH

The numbers between parentheses refer to the fold-out.





Manual start recording

About AUTO TRACK and AUTO STOP

- AUTO TRACK is a function to increment track numbers either manually or automatically.
  AUTO TRACK ON : track number will be automatically incremented according to the source. (See the table on page 22.)
  AUTO TRACK OFF : track number can be manually incremented by pressing *TRACK INCR.* (73).
- When AUTO TRACK is ON, you can also set AUTO STOP function.
  AUTO STOP ON : the recording will be stopped automatically. (See the Table on page 23.)
  AUTO STOP OFF : the recording has to be stopped manually.

Note:

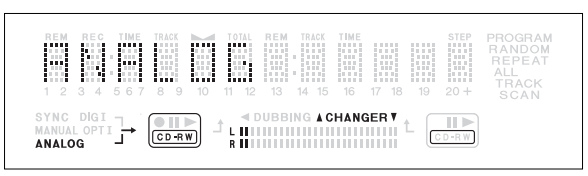
AUTO STOP function is only activated when Manual start recording (REC MANUAL mode) is used.

① Make sure the disc is absolutely free of scratches and dust particles.

② Connect the cable from an external source to the CD-Recorder. (see INSTALLATION page 5 and 6.)

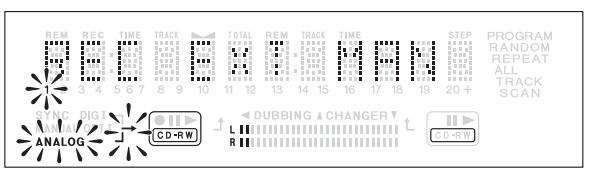
③ Press *INPUT* (9) repeatedly until the selected external source appears on the display (depending on the connection used):

➔ **DIGI**, **OPTI** or **ANALOG** lights up and DIGITAL 1, OPTICAL or ANALOG appears on the display.



④ With the recorder stopped, press *REC MODE* (10) to enter the Manual Record standby mode.

➔ **MANUAL** starts to flash and the display shows REC EXT MAN.



- If **DIGI** or **OPTI** flashes, the digital connection is incorrect.

⑤ Set the optimal recording level on the CD-Recorder.

1. Play the source first to set the optimal recording level on the CD-Recorder.
2. Rotate the *REC LEVEL/SELCT* (13) key until, on the Record/Play Level bar, all the blue segments are alight, but the red segments do not light continuously during the loudest passages.
   DIGITAL RECORDING : +6dB ~ –63dB
   ANALOG RECORDING: 0dB ~ –63dB
3. Stop the source.
   - To record a 3-second silence at the start of a track, press ▶/II (6) or II (82) before starting the source.

⑥ To start recording, press ● (4) on the CD-Recorder and immediately start the source (from Stop-mode).

The track number and recording time left appear on the display.

- If ■ (5, 87) was pressed within 3 seconds after ● (4), no recording will take place.
- To check the elapsed recording time, press *TIME* (14) or *DISPLAY* (77). (This can also be done during the recording.)

⑦ To stop recording, press ■ (5, 87).

- To interrupt recording, press ▶/II (6) or II (82).

After recording the display will show UPDATE for several seconds.

Note:

The recorded sound might be distorted when you adjust the recording level to set above 0dB for digital recording and -12dB for analog recording. The default setting of recvolume for digital is 0dB and analog is -12dB when this CD-Recorder is shipped.

Important:

If you want to play the recorded CD-R disc on any regular CD player, it must first be finalized. See finalizing discs.

Finalized CD-RW discs play only on CD-RW compatible CD players.

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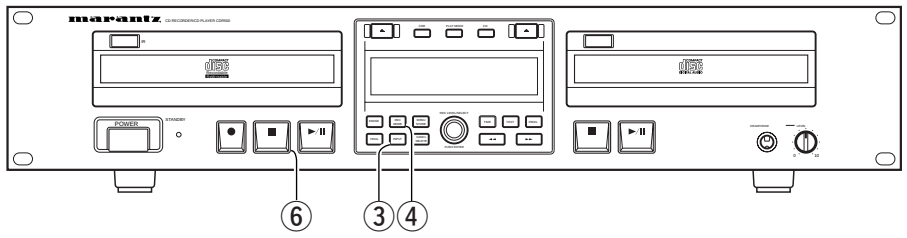
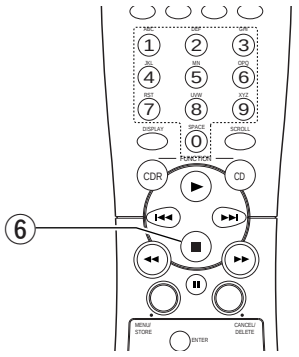
ENGLISH

RECORDING

The numbers between parentheses refer to the fold-out.





CD-SYNC

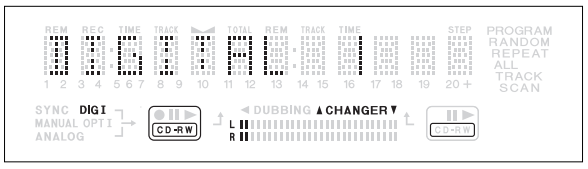
The CD-SYNC feature enables you to make fast and easy recordings of a CD. Track increments are automatically detected from the source material. Track increments cannot be added manually. In analog source material a silence (<- 55dBFS) of 2.7 seconds or more is automatically detected as a track increment.

① **Make sure the disc is absolutely free of scratches and dust particles.**

② **Connect the cable from an external CD player to the CD-Recorder.** (see INSTALLATION from page 5 to 6.)

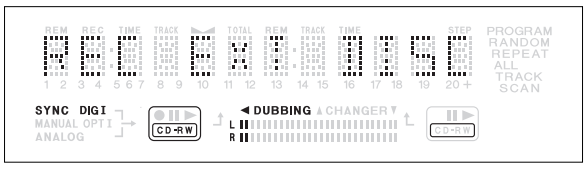
③ **Press *INPUT* (9) repeatedly until the selected source, appears on the display** (depending on the digital connection used):

➔ **DIGI**, **OPTI** or **ANALOG** lights up and DIGITAL 1, OPTICAL or ANALOG appears on the display.



④ **With the CD-Recorder stopped, press *REC MODE*(10) four times: if you wish to record a complete disc or program.**

➔ **SYNC** start to flash and the display shows REC EXT DISC.



- If **DIGI** or **OPTI** flashes, the digital connection is incorrect.

Note:

You can adjust the recording level by rotating the *REC LEVEL/SELECT* (13).

DIGITAL RECORDING : +6dB ~ –63dB

ANALOG RECORDING : 0dB ~ –63dB

⑤ **To start recording, press PLAY on the selected source.**

➔ The CD-Recorder automatically starts to record. The recording time left appears on the display.

- If, however, you start the source during a track, CD-SYNC recording starts at the beginning of the next track or after 2.7 seconds of silence in analog recordings.
- To check the elapsed recording time, press *TIME* (14) or *DISPLAY* (77). (This can also be done during recording)
- The recorder stops automatically.

⑥ **To stop recording manually, press ■ (5, 87).**

- If ■ (5, 87) was pressed within 3 seconds after pressing **PLAY** on the selected source, no recording will take place.
- To interrupt recording, press ▶/II (6) or II (82). To resume, press ● (4) on the CD-Recorder.

After recording the display will show UPDATE for several seconds.

Note:

- Recordings from DAT, DCC or analog sources will only stop after 20 seconds silence.
- With AUTO TRACK ON, recordings from DAT, DCC or recordings made analogously will stop after 20 seconds silence. With AUTO TRACK OFF, the auto stop mode is disabled.
- MAKE CD will automatically finalize the CD-R(W) after synchronized recording. It takes about 1 minute to start auto finalizing after finish recording the last track. (WAIT appears on the display.)
- The recorded sound might be distorted when you adjust the recording level to set above 0dB for digital recording and -12dB for analog recording. The default setting of recvolume for digital is 0dB and analog is -12dB when this CD-Recorder is shipped.

Important:

If you want to play the recorded CD-R disc on any regular CD player, it must first be finalized. See finalizing discs.

Finalized CD-RW discs play only on CD-RW compatible CD players.

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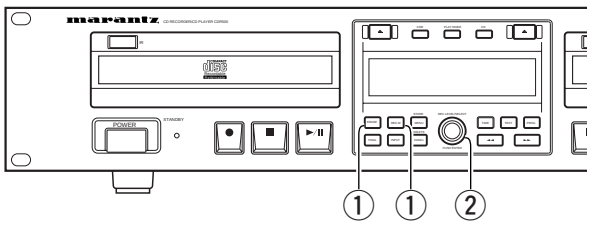
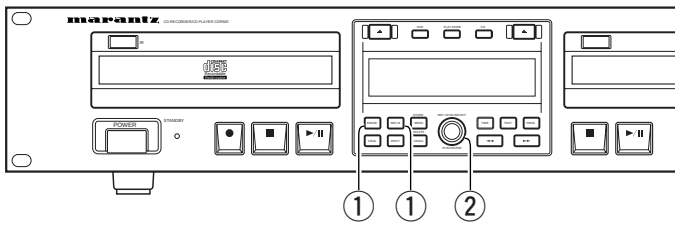
FINALIZING/UNFINALIZING

ENGLISH

The numbers between parentheses refer to the fold-out.





Finalizing CD-R & CD-RW discs

Finalizing is a simple procedure, necessary to:

- be able to play the recorded CD-R(W) disc on a CD PLAYER.
- avoid further unwanted recordings on a disc.
- avoid erasure of tracks on a CD-RW.

Auto finalizing

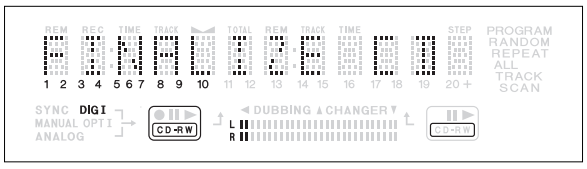
Auto finalizing is possible when using the MAKE CD *recording function.*

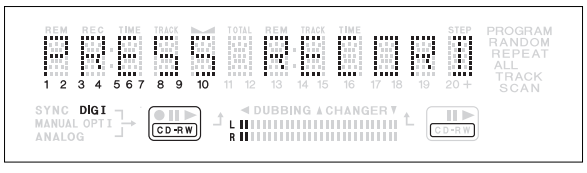
Manual finalizing

① Make sure the disc (in the CD-Recorder) is absolutely free of scratches and dust particles.

② With the recorder stopped press *FINAL* (8).

➔ The display shows FINALIZE CD and PRESS RECORD.





③ Press ● (4).

➔ XXXX FINAL and the approximate finalization time appears on the display.
The display counts down through the finalization.
On completion, the total number of tracks and the total time recorded appears on the display.
For CD-R(W), CD-R(W) changes to CD on display.

Finalizing will take at least 2 - 4 minutes.

Note:

During finalization, the CD-Recorder accepts no operating commands.

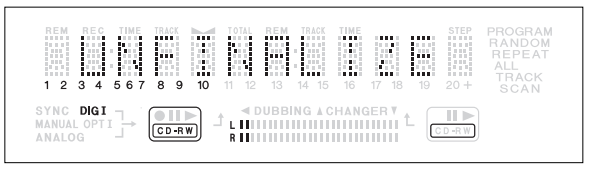
Unfinalizing CD-RW discs

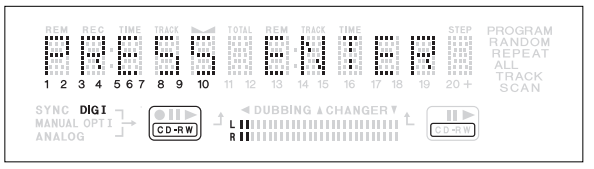
For CD-RW discs only.

If you want to make more recordings (or erasures of tracks) on a finalized disc you must unfinalize it first. The Table of Contents (TOC) will be removed.

① With the CD-Recorder stopped, press *REC MODE* (10) or *ERASE* (7).

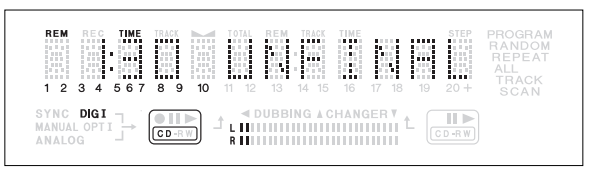
➔ UNFINALIZE and PRESS ENTER will appear on the display.





② Press *PUSH ENTER* (13).

➔ The disc will now be unfinalized and can be recorded on again.



Note:

- Unfinalizing will take approximately 1.5 minutes.
- When unfinalizing a CD-RW disc with text on it available, this text will be transferred to the CD-Recorder memory. It may occur that the text memory is full. The message MEMORY FULL/FINALIZE CD will be displayed. You will now have to erase text, stored for other discs, or finalize another disc in order to obtain memory space.

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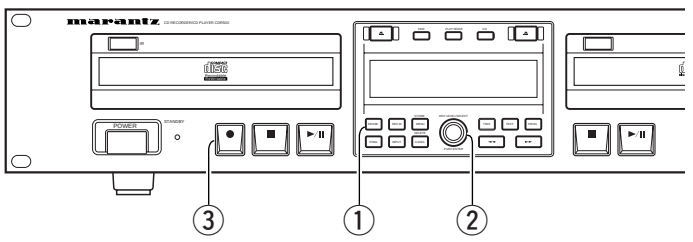
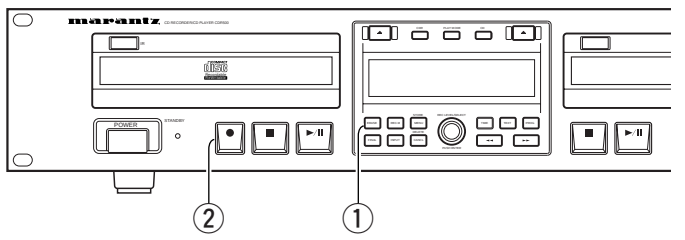
ENGLISH

ERASING

The numbers between parentheses refer to the fold-out.





Erasing

For unfinalized CD-RW discs only.
You can erase:

- one or more tracks from the end,
- the entire disc.

Erasing one or more tracks from the end

① Press *ERASE* (7) once.

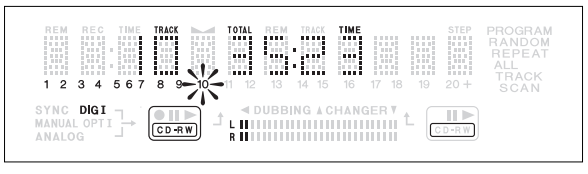
➔ The display shows the number of tracks and their total playing time. ERASE TRACK and PRESS RECORD light up.

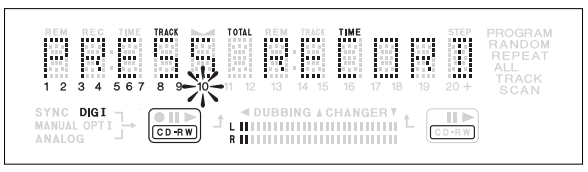
• If the disc is finalized, CD appears on the display after inserting a CD-RW in the recorder. The recorder will ask you to confirm unfinalizing first. Confirm by pressing the *PUSH ENTER* (13) key or *ENTER* (84) on the remote control.

② Select the track(s) you wish to erase by turning the *REC LEVEL/SELECT* (13) key to the left and confirm by pressing this key.

➔ The selected track numbers start blinking on the track bar.

➔ The display shows the remaining number of tracks and the remaining playing time after erasing the selected track(s).





③ Press ● (4).

➔ The display shows the total countdown time and ERASE appears on the display.

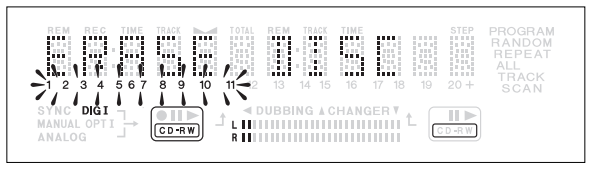
➔ After the selected track(s) have erased, the display shows the remaining tracks and their total playing time.

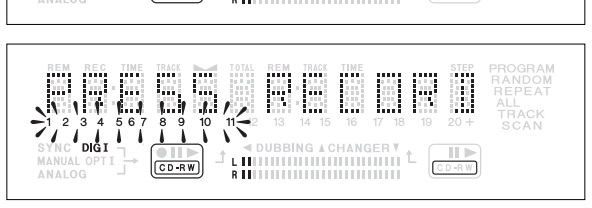
Erasing the entire disc

① Press *ERASE* (7) twice.

➔ The display shows the number of tracks and their total playing time. ERASE DISC and PRESS RECORD light up.

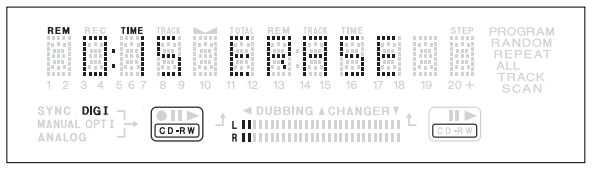
• If the disc is finalized, CD appears on the display after inserting a CD-RW in the recorder. The recorder will ask you to confirm unfinalizing first. Confirm by pressing the *PUSH ENTER* (13) key or *ENTER* (84) on the remote control.





② Press ● (4).

➔ The display shows the total countdown time and ERASE appears on the display. The complete disc will be erased.



Erasure of a complete disc may take up to 15 seconds.

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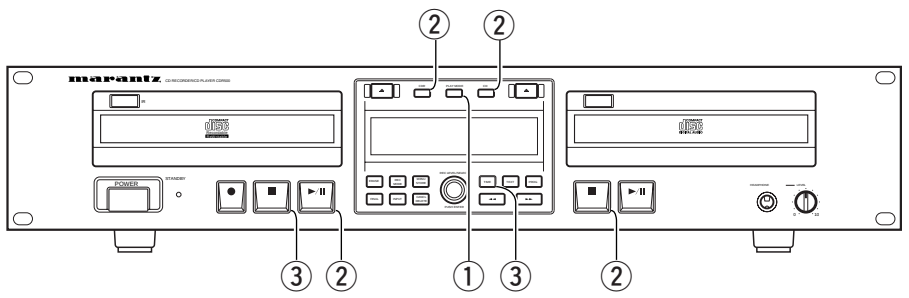
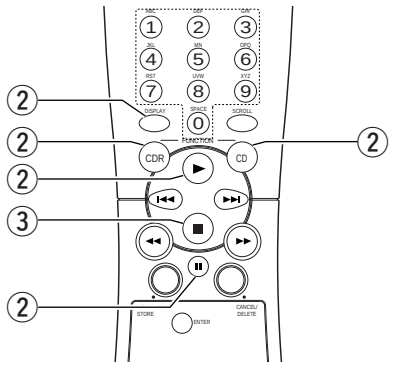
PLAYING

The numbers between parentheses refer to the fold-out.



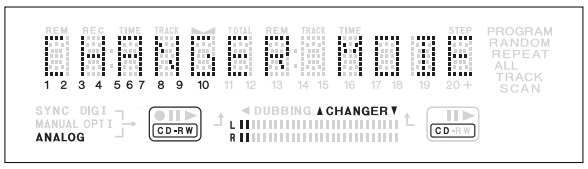


Playing a 2-disc-changer (Changer mode)

Your CD-Recorder is able to play the two decks sequentially.

① Select Changer mode using the *PLAY MODE* (26).

➔ CHANGER appears on the display and ▲CHANGER▼ lights up.



② On the deck you want to play, press ▶/II (6, 20) to start CD play.

➔ The track number and track time of the track in play appear on the display.

➔ The second disk will not be played back until the first disk has finished no matter whether playback is run from deck one or deck two. The playback procedure will be automatically ended once playback of the second disk has been completed.

- Press *TIME* (14) or *DISPLAY* (77) once, twice or three times to see:
  ➔ remaining track time, total remaining time, text information (see MENU MODE page 21).
- To interrupt play temporarily, press ▶/II (6, 20) again.
  ➔ II lights on the display.
- To continue play, press ▶/II (6, 20) again.

③ To stop play, press ■ (5, 19, 87).

➔ The number of tracks and the total playing time appear on the display.

Note:

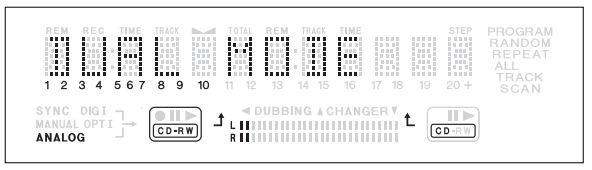
DISPLAY (77) button is only on the remote control.

Playing CDs on Deck 1 and/or Deck 2 (DUAL mode)

With this double deck it is possible to play the CD-Recorder deck and/or the CD player deck individually (at the same time). In this case the extra CD output must also be connected to an amplifier.

① Select DUAL mode using the *PLAY MODE* (26).

➔ DUAL MODE appears on the display and ⇂↾ lights up.



② On the deck you want to play, press ▶/II (6, 20) to start CD play.

➔ ▶ lights up and the track number and track time of the track in play appear on the display.

- Press *TIME* (14) or *DISPLAY* (77) once, twice or three times to see:
  ➔ remaining track time, total remaining time, text information (see MENU MODE page 21).
  If you want to see this information about the other deck, press *CDR* (27) or *CD* (25).
- To interrupt play temporarily, press ▶/II (6, 20) again.
  ➔ II lights on the display.
- To continue play, press ▶/II (6, 20) again.

③ To stop play, press ■ *STOP* (5, 19, 87).

➔ The number of tracks and the total playing time appear on the display.

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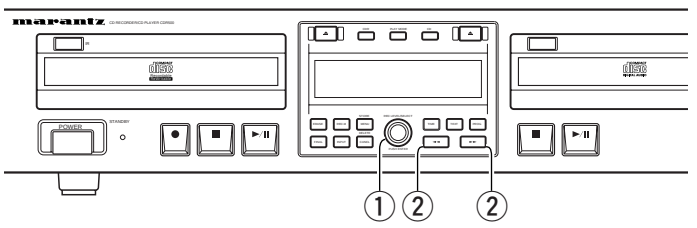
ENGLISH

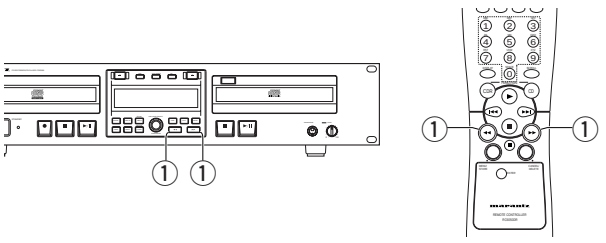
PLAYING

The numbers between parentheses refer to the fold-out.

EX: Selecting a track when CD play is stopped
1 On the CDR500 recorder.



EX: Search



Selecting a track

Selecting a track during play

1 On the CDR500 recorder.

① Turn the *REC LEVEL/SELECT* (13) key until the required track number appears on the display.
➔ Play skips to the beginning of the selected track.

2 On the remote control <i>.

① Key in the required track number using the *NUMERICAL* (76) keys. For 2-digit track numbers, press the keys in rapid succession.
➔ Play skips to the beginning of the selected track.

3 On the remote control <ii>.

① Press ⏮ (80) or ⏭ (88) one or more times.
➔ Play skips to the beginning of the present, previous or subsequent tracks.

Selecting a track when CD play is stopped

1 On the CDR500 recorder.

① Turn the *REC LEVEL/SELECT* (13) key until the required track number appears on the display.
② Press *PUSH ENTER* (13) to confirm or press ▶/II (6) to start playing.

2 On the remote control <i>.

① Key in the required track number using the *NUMERICAL* (76) keys. For 2-digit track numbers, press the keys in rapid succession. Play starts.

3 On the remote control <ii>.

① Briefly press ⏮ (80) or ⏭ (88) one or more times.
② Start playback by pressing ▶ (79) or *ENTER* (84).

Scan play

① To start scan play, press *SCAN* (74) on the remote control.

- It plays the first 10 seconds of each track.
- It automatically stops after playing all tracks.

② To stop playing, press ■ (87).

- The SCAN level disappears from the display.

Note:

Scan play is unavailabe in DUAL mode.

Search

① Press ▶/II (6) or ▶ (79).

② Hold down ◀◀ (15, 81) or ▶▶ (17, 86).

➔ The player first searches backwards or forwards at 10 times normal speed with sound at low volume, then goes to 50 times normal speed with sound muted.

③ Release the button at the desired passage.

➔ Play starts at the desired passage.

Note:

During Random, Repeat Track or Programmed play, search is restricted to within the track being played at the time.

Random play

① Press *RANDOM* (92) before or during CD play to start random play.

➔ The tracks on the CD (or program if set) play in random order.

② Press *RANDOM* (92) again to return to normal CD play.

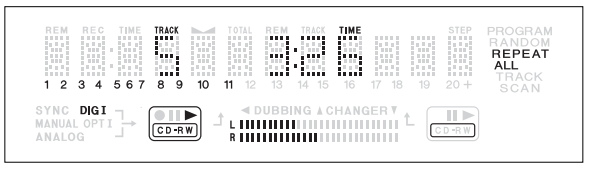
Note:

Random play is unavailabe in DUAL mode.
RANDOM is also cleared if you open the disc tray.

Repeat play

① Press *REPEAT* (75) one or more times during CD play.

➔ When **REPEAT TRACK** lights up, the current track plays repeatedly. When **REPEAT ALL** lights up, the disc or program plays repeatedly.



② To return to normal play, press *REPEAT* (75) one or more times until:

➔ The **REPEAT** label disappears from the display.

Note:

Repeat is also cleared if you open the disc tray.

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PROGRAMMING

The numbers between parentheses refer to the fold-out.

ENGLISH

Programmed play

- You can program up to 99 tracks to play in any desired sequence.
- Tracks can be programmed more than once, but each time counts as a track. (step)

Programming for playback

① Select Changer mode or DUAL mode using the *PLAY MODE* (26).

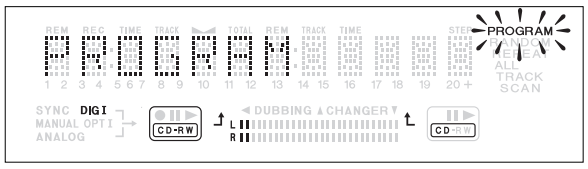
➔ CHANGER or DUAL MODE appears on the display.

② Press *CDR* (27, 78) or *CD* (25,89) to select the required deck.

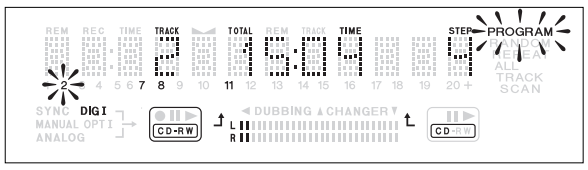
➔ Selected key lights up in the display.

③ Press *PROG* (18, 91) on the remote control to enter Program mode.

➔ **PROGRAM** flashes and PROGRAM appears on the display.



④ Select the required track numbers by turning the *REC LEVEL/SELECT* (13) key left or right and store by pressing *PUSH ENTER* (13).



or:

Key in a track number with the *NUMBER* (76). For 2-digit numbers, press the keys in rapid succession and store by pressing *PUSH/ENTER* (13) on *ENTER* (84).

➔ The track will be stored in the program.

➔ The track number, total program time and the number of programmed tracks (steps) are displayed.

⑤ Repeat step ③ and ④ for all tracks to be programmed.

⑥ Press ■ (5, 87) or *PROG* (18, 91) to end programming.

➔ **PROGRAM** lights continuously.

⑦ Press ▶/II (6,20) or ▶ (79) to start programmed play.

Clearing a program

① Press ■ (5, 87) if necessary to stop programmed play.

② Press ■ (5, 87) again to clear the program.

➔ **PROGRAM** disappears from the display.

- The program is also cleared if you open the disc tray.

Erasing a track from a program

① In Stop mode press *PROG* (18, 91) to enter Program mode.

② Use ◀◀ (15,81) or ▶▶ (17,86) to select the track from which to delete.

➔ The track number and program step will be shown on the display.

③ Press *CANCEL/DELETE* (11,85) to erase the track from the program.

➔ The remaining program steps and the remaining playing time of the program will be displayed.

Programming for recording

① Press *REC MODE* (10) to select the required recording mode (see 'RECORDING').

② Compile your program as described in "programming for playback".

- Only tracks from the disc in the CD player can be stored.

③ Press ● (4) to start recording.

Note:

- To review the program, press *PROG* (18, 91), followed by ◀◀ (15,81) or ▶▶ (17, 86) with the CD player or CD-Recorder in stop mode.
- To add more tracks to the program, repeat steps ① to ⑤.
- If you try to store more than 99 tracks, PROG FULL appears on the display.
- *PROG* (18, 91) button is only on the remote control.

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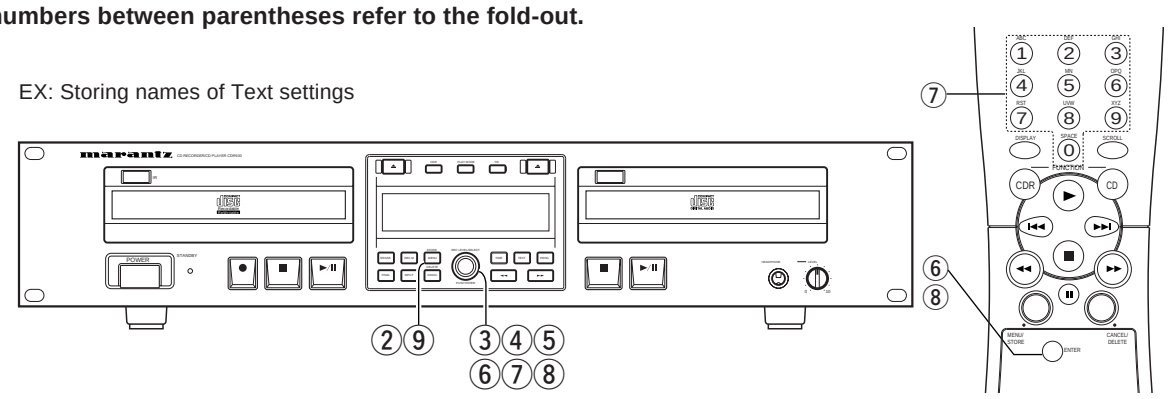
ENGLISH

MENU MODE

The numbers between parentheses refer to the fold-out.

EX: Storing names of Text settings



About MENU MODE

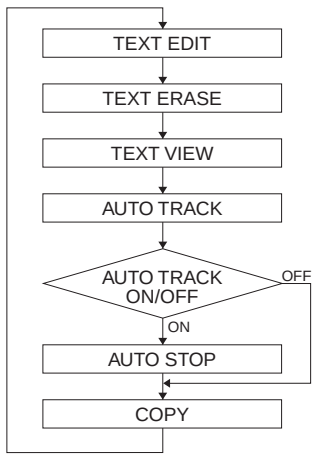
MENU MODE can set up more sophisticated setting for making CDs. There are two kinds of submenus in the MENU MODE.

- Text submenus ..... adding and erasing the CD text
- Recording submenus ... Auto track increment ON/OFF
  ... Auto stop ON/OFF
  ... SCMS copy protaction
  ... Adjusting right-left-volume balance during the recording

Note:

TEXT can only be edited on unfinalized discs. (finalized CD-RW discs must be unfinalized)

Structure of MENU MODE in the STOPMODE



Note:

When AUTO TRACK increment is OFF, AUTO STOP does not appear on the display.

Text Submenus

The TEXT submenus allow you to enter text information on the CD-R(W); for example the CD titles, the artist names, the track names and so on. During playback, the TEXT will appear on the display.

Storing names

① Press *STORE/MENU* (12, 83) to enter Menu mode.
TEXT EDIT appears on the display.

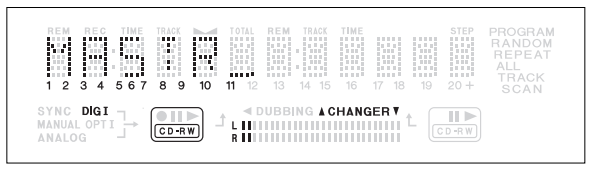
② Rotate *REC LEVEL/SELECT* (13) or press ◄◄ (80), ►► (88) to select the TEXT EDIT submenus.

③ Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.

④ Rotate *REC LEVEL/SELECT* (13) or press ◄◄ (80), ►► (88) to select the required option in the submenu: CD Artist, CD Title, Track 1 Artist, Track 1 Title, etc.

⑤ Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.

⑥ Select the characters by rotating the *REC LEVEL/SELECT* (13) or by pressing the corresponding numeric/alphabet key (76).



⑦ Press *PUSH ENTER* (13) or *ENTER* (84) to store the characters and move to the next cursor position.

Note:

- A maximum of 60 characters can be stored per item.
- With the ◄◄ (15, 81) ►► (17, 86) keys you can move to a required cursor position.
- With the *DELETE/CANCEL* (11, 85) you can delete a character.
- By pressing the *PUSH ENTER* (13) or *ENTER* (84) without selecting a character first, you can insert a space between characters.
- When an artist's name has been stored for a certain track, the name will automatically be copied for the next track. The name can be confirmed by pressing *STORE/MENU* (12, 83) or a new name can be entered as described above.

⑧ Press *STORE/MENU* (12, 83) to store a name you have entered and return to the submenu or ■ (5, 87) to exit.

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MENU MODE

The numbers between parentheses refer to the fold-out.

Erasing names

① **Stay in the stop mode. (No Operation)**

② **Press *STORE/MENU* (12, 83) on the deck or the remote control to enter Menu mode.**

③ **Rotate *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the submenu TEXT ERASE.**
TEXT ERASE appears on the display.

④ **Press *PUSH ENTER* (13) or *ENTER* (84) on the remote control to confirm.**

⑤ **Rotate *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the required option in the submenu: All Text, CD Title, CD Artist, Track 1 Title, Track 1 Artist, etc.**

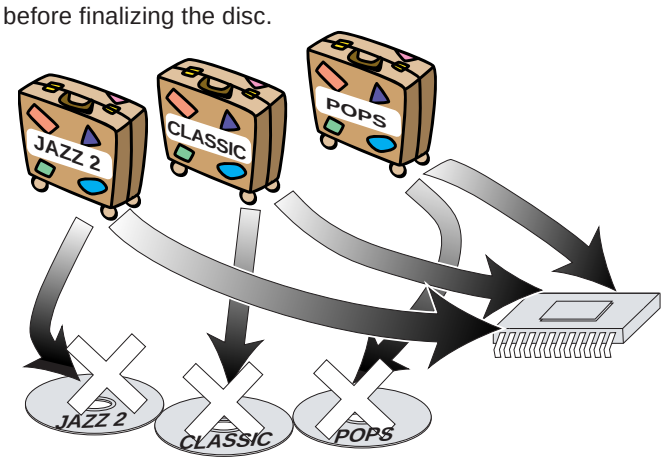
⑥ **Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.**
The display will ask you to reconfirm your selection.

⑦ **Press *PUSH ENTER* (13) or *ENTER* (84) to reconfirm.**

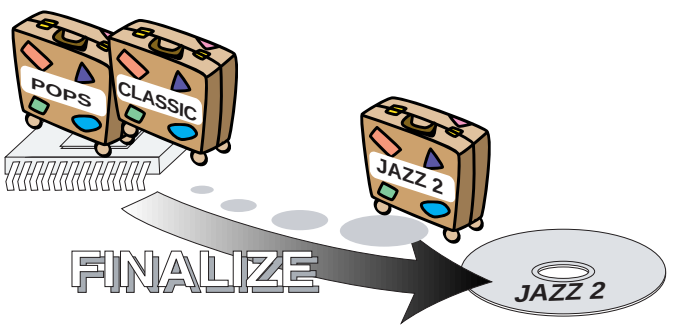
⑧ **Press *STORE/MENU* (12, 83) to return to the submenu or ■ (5, 87) to exit.**

About TEXT

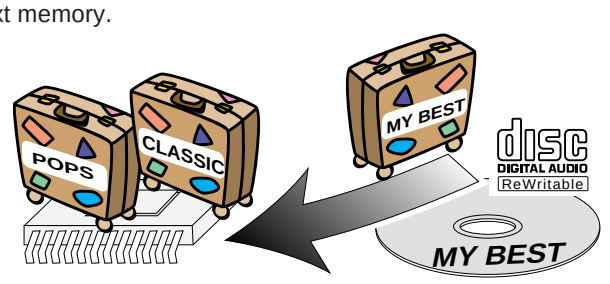
The input text data is saved in the text memory until the disc is finalized. Therefore, the data is not written in the CD-R(W) disc before finalizing the disc.



Finalizing the disc transfers the text data from the text memory to the disc.



Unfinalizing the disc transfers the text data from the disc to the text memory.



UNFINALIZE

When the text memory is full, MEMORY FULL appears on the display and you cannot add more text data.
In this case, you need to make more space in text memory. You can either finalize one or more disc(s) to transfer the text data to each disc, or erase (part of) the text data in the text memory.

Note:
When the text memory is full depends on the amount of the input text data per disc and the number of discs.
Typically the text memory can store for 50 discs of the text data consisting of 60 characters of an artist name or title for 20 tracks.

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ENGLISH

MENU MODE

The numbers between parentheses refer to the fold-out.

Text Memory Review/Erase Text Memory

The input text data of the disc is once saved in the text memory until finalizing the disc. When the text memory is full, MEMORY FULL will appear on the display and unable to add more text data. If you want to add more text data, you have to finalize the text data for each disc in order to obtain memory space or erase the entire memory following the operation below.

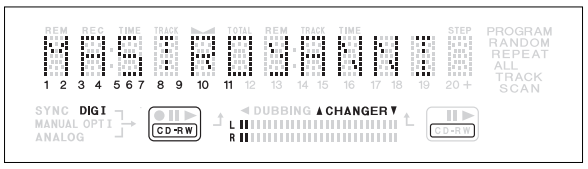
① **Stay in the stop mode. (No Operation)**

② **Press *STORE/MENU* (12, 83) on the deck or the remote control to enter Menu mode.**

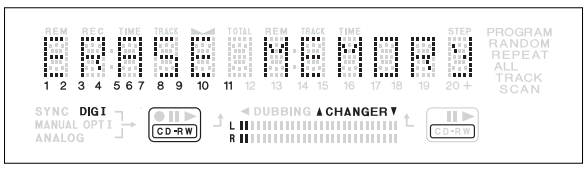
③ **Rotate *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the TEXT VIEW submenu.**
TEXT VIEW appears on the display.

④ **Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.**

⑤ **Rotate *RECLEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the disc you wish to erase.**



⑥ **Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.**
ERASE MEMORY **appears on the display.**



⑦ **Press the *PUSH ENTER* (13) or *ENTER* (84) to confirm the erasure of the text for that particular disc.**

⑧ **Press *STORE/MENU* (12, 83) to return to the submenu or ■ (5, 87) to exit.**

Note:

- If there are no discs in the memory, the message MEMORY EMPTY appears on the display.
- MEMORY FULL/FINALIZE [ ] may also appear when unfinalizing a CD-RW disc for which text was stored (see 'UNFINALIZING CD-RW discs' page 15.). The same action(s) should be taken in order to obtain memory space.

Recording submenus

- When Auto Track is ON, track numbers will automatically be increased during the recording, also able to set Auto stop ON/OFF.
- You can adjust the right and left volume balance during the recording.

Auto track increment

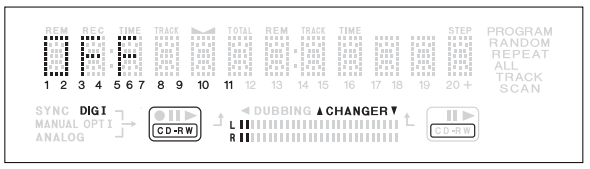
① **Stay in the stop mode. (No Operation)**

② **Press *STORE/MENU* (12, 83) on the deck or the remote control to enter Menu mode.**

③ **Rotate *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the AUTO TRACK submenu.**
AUTO TRACK appears on the display.

④ **Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.**

⑤ **Select Auto track ON or OFF by rotating *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88).**



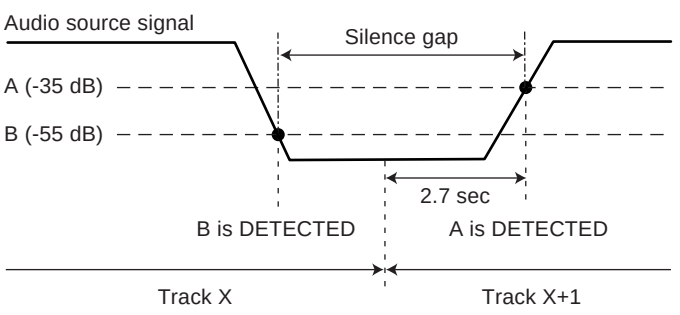
⑥ **Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.**
- When ON is selected, track numbers will be automatically incremented during recording.
- When OFF is selected, you can number the recorded tracks yourself by press *TRACK INCR* (73).

⑦ **Press *STORE/MENU* (12, 83) to store settings and return to the submenu or ■ (5, 87) to exit.**

Source \ AUTO TRACK	ON
CD/MD (with user data)	Track increment based on user data of in coming signal
DAT/DCC (with user data)	Track increment based on user data of in coming signal
Unknown (no user data)	Track increment after silence gap of 2.7 seconds on incoming signal
Analog	Track increment after silence gap of 2.7 seconds on incoming signal
No source (no lock)	None

Note:

- Auto track is a function to increase the track numbers either automatically or manually. When Auto track is ON, there are two ways for decision.
- If a digital source has track information (Q-subcode) such as CD or MD, the track transition is automatically increased according to track information of the digital source.
- If an audio source is analog or digital without track information, silence gap is detected. When length of silence gap is more than 2.7 seconds, the auto track function is automatically activated at the point of 2.7 seconds just before A (- 35 dB) is detected. (See following figure below.)



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MENU MODE

ENGLISH

The numbers between parentheses refer to the fold-out.

Auto stop

Note:
Set Auto track increment ON, otherwise AUTO STOP does not show in the menu.

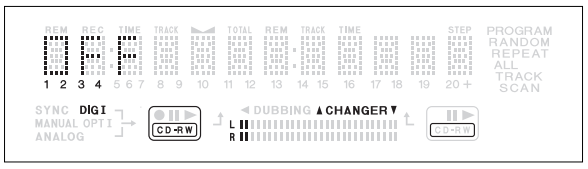
① **Set stop mode.**

② **Press *STORE/MENU* (12, 83) on the deck or the remote control to enter Menu mode.**

③ **Rotate *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the AUTO STOP submenus.**
AUTO STOP appears on the display.

④ **Press *PUSH/ENTER* (13) or *ENTER* (84) to confirm.**

⑤ **Select Auto stop ON or OFF by rotating *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88).**
AUTO STOP ON : fully automatic stop.
AUTO STOP OFF : only manual stop during the recording.



⑥ **Press *PUSH/ENTER* (13) or *ENTER* (84) on the remote control to confirm.**

⑦ **Press *STORE/MENU* (12, 83) to store setting and return to the submenu, or press ■ (5, 87) to exit.**

AUTO STOP / Source	ON
CD/MD (with user data)	Stop after 3 seconds of user DATA of stop pattern detected on the incoming source signal
DAT/DCC (with user data)	Stop after 20 seconds of silence
Unknown (no user data available)	Stop after 20 seconds of silence
Analog	Stop after 20 seconds of silence
No source (no lock)	Stop after 3 seconds of unlock

Copy protection

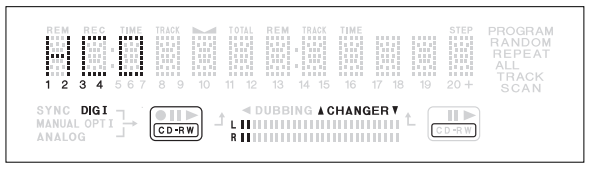
① **Set stop mode.**

② **Press *STORE/MENU* (12, 83) to enter Menu mode.**

③ **Rotate *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the Copy submenus.**
COPY appears on the display.

④ **Press *PUSH/ENTER* (13) or *ENTER* (84) to confirm.**

⑤ **Select Copy ON, OFF, or HCO by rotating *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88).**
Copy protection OFF:
makes this recording 'copy permitted.' Unlimited copies can be made by a Consumer CD-Recorder.
Copy protection ON:
makes this recording 'copy protected.' One 'Home Copy of protected Original' can be made from this recording by a consumer recordr; this copy (HCO) cannot be re-produced by a Consumer CD-Recorder.
Home Copy of Original:
make this recording a 'Home Copy of protected Original' (HCO) straight away. NO copy can be made from this recording by a Consumer CD-Recorder.



⑥ **Press *PUSH/ENTER* (13) or *ENTER* (84) to confirm.**

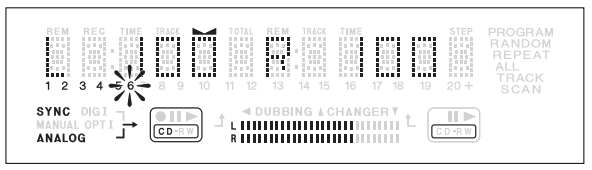
⑦ **Press *STORE/MENU* (12, 83) to store setting and return to the submenu, or press ■ (5, 87) to exit.**

Note:
- Since this CD-recorder is a professional CD-Recorder, all CDs can be copied even with HCO.
- Making an analog copy is always possible by a consumer recordr; from the recorded CD-R(W) disc even selected either OFF, ON or HCO.

Balance (Only active in Record/Standby mode)

① **Press *STORE/MENU* (12, 83) to enter Menu mode.**

② **Rotate *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88) to select the SET BALANCE submenu.**
SET BALANCE appears on the display.



③ **Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.**
→ and L 100 R 100 appear on the display.

④ **Adjust the recording balance by turning the *REC LEVEL/SELECT* (13) or press ⏮ (80), ⏭ (88).**

⑤ **Press *PUSH ENTER* (13) or *ENTER* (84) to confirm.**

⑥ **Press *STORE/MENU* (12, 83) to store settings.**

Note:
The balance setting will not be stored.

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ENGLISH

DISPLAY

Messages, as listed and explained here, may appear on the display for your guidance.

General

READING ..... reading disc information
OPEN ..... during tray opening
CLOSE ..... during tray closing
NO DISC ..... no disc inserted, disc unreadable or disc inserted upside down
PROG FULL ..... program full
INSERT DISC ..... insert disc or insert disc in correct way
WRONG DISC ..... inserted disc is no audio CD
UNFINALIZED ..... unfinalized CD-R(W) disc
MEMORY xx% ..... indicates the amount of text memory used for unfinalized discs

Recording

WAIT ..... - when ■ STOP is pressed during recording
- when ■ STOP is pressed during recording the first 4 seconds of a track
UPDATE ..... updating disc contents
DISC FULL ..... no more recording possible
DIGITAL 1 ..... digital coaxial input 1 selected
OPTICAL ..... digital optical input selected
ANALOG ..... analog input selected
NOT FINALIZED ..... when opening the tray with an unfinalized disc inserted (in the CD-Recorder)
RECORD FAST ..... High Speed recording selected
REC LISTEN ..... Listen Speed recording selected
MAKE CD ..... Start of synchronised recording of a complete disc and Auto Finalize function selected
REC EXT DISC ..... Synchronised start of recording from external source selected
REC EXT MAN ..... Manual start of recording from external source selected
-xx dB ..... level is being adjusted
DOES NOT FIT ..... time left on CD-R(W) disc is not enough for proposed recording
ERASE TRACK ..... when erasing one or more tracks
ERASE DISC ..... when erasing a disc
FINALIZE CD ..... when finalizing a disc
CHECK INPUT ..... when ● is pressed while no digital source is detected
xx xx ERASE ..... time countdown when erasing a track or a disc
xxxx FINAL ..... time countdown when finalizing a disc
PRESS RECORD ..... to start manual recording, finalizing or erasing
START SOURCE ..... to start synchronised recording from a source
FINALIZED ..... when trying to record on a finalized CD-R(W) or a prerecorded CD
UNFINALIZE ..... when trying to record on a
PRESS ENTER finalized CD-RW
PROF SOURCE ..... when a professional source is connected

Play

CHANGER ..... CD changer-mode selected
DUAL MODE ..... DUAL- mode selected when recording keys are pressed in DUAL-mode
PROGRAM ..... program mode selected
ALBUM TITLE ..... will be followed by album title
TRACK TITLE ..... will be followed by track title
ALBUM ARTIST ..... will be followed by artist name
TRACK ARTIST ..... will be followed by track artist name

Others

NO AUDIO TR ..... when the recorder enters a data track during recording
FINALIZED CD ..... laser power calibration performed 96 times, finalize disc
INITIALIZING ..... during laser power calibration for unfinalized discs
DISC RECOVER ..... during disc recovering after power failure
OPC ERROR ..... OPC failure during OPC procedure (OPC = Optimum Power Calibration)
RECORD ERROR ..... recording error in menu mode
DISC ERROR ..... when trying to record on or finalize a recovered disc
MEMORY FULL ..... when text memory is full. To add a
FINALIZE CD CD to the list, first finalize or erase another disc from the list.

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DISPLAY

Menu messages

NO TRACKS ..... when attempting to edit text for a disc which has no tracks

TEXT EDIT ..... when entering Text Edit mode

CD ARTIST ..... when editing or erasing an artist name

CD TITLE ..... when editing or erasing a title

ARTIST TR N ..... when editing or erasing an artist name per track

TITLE TR N ..... when editing or erasing a title per track

TEXT ERASE ..... when entering Text Erase mode

ALL TEXT ..... when entering All Text mode

ERASE OK ..... when confirmation for erasing has to be given with ENTER key

ERASE ALL OK ..... when confirmation for erasing has to be given with ENTER key

ERASE MEMORY ..... when waiting for confirmation when erasing a disc

TEXT VIEW ..... when selecting text review per unfinalized disc in memory

MEMORY EMPTY ..... when REVIEW is selected while no text is in memory

AUTO TRACK ..... when selecting auto track increment ON or OFF

ON ..... Auto Track increment on

OFF ..... Auto Track increment off

SET BALANCE ..... when selecting BALANCE

NO TEXT ..... no text stored for disc

OTHER INFORMATIONS

ENGLISH

The numbers between parentheses refer to the fold-out.

Fixing problems

If you think your CD-Recorder is defective, it is wise to read this list first. Maybe you forgot a simple step.

Warning!

Under no circumstances should you attempt to repair the CD-recorder yourself as this will invalidate the guarantee.

No power

- ensure that the ***POWER ON/OFF*** (1) button is on: the CD-Recorder is in standby mode, press any button to activate it
- ensure that the power cord is plugged in correctly
- switch the recorder OFF and then immediately back ON

Auto track does not work

- check if auto track is selected
- check if there are 2.7 seconds silence in between the tracks (analog recording only)
- check if the source is consumer source with the digital output according to IEC audio standard
- source is DVD disc (no track information)

No sound

- check the audio connections
- if using an amplifier, try using a different source

Amplifier sound is distorted

- check that the CD-Recorder analog output is not connected to the amplifier PHONE input.

Play will not start

- ensure that the label of the CD is facing up
- clean the disc
- check that the disc is not defective by trying another disc

Remote control does not work

- point the remote control directly at the CD-Recorder
- check the batteries and replace if necessary
- select the right source first
- set the remote control selector to 'INTERNAL'

Will not record

- clean the disc
- check if CD-R(W) is an unfinalized disc
- check that the disc is recordable and replace if necessary
- the disc is not an audio disc (WRONG DISC)
- wrong input source chosen.
- text memory full (MEMORY FULL/FINALIZE CD). When a CD-RW has to be unfinalized for recording. Erase text for other disc(s) or finalize other disc(s) to obtain memory space.

Recording is distorted

- make sure the recording level was not too high

20 second pause between recordings

- see 'RECORDING' CD SYNC

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ENGLISH

OTHER INFORMATIONS

The numbers between parentheses refer to the fold-out.

Player does not react

- use the ***POWER ON/OFF*** (1) button on the front of the Player to switch it off and back on

DISC RECOVER on display

- a power failure has occurred during recording the CD-Recorder is attempting to repair the disc
- If DISC ERROR then appears on the display, the disc cannot be recorded further, and cannot be finalised. But it can still be played on the CD-Recorder or another CD-Recorder.
- on a CD-R(W) disc, the track being recorded is lost, but further recording and finalisation can still be done

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MEMO

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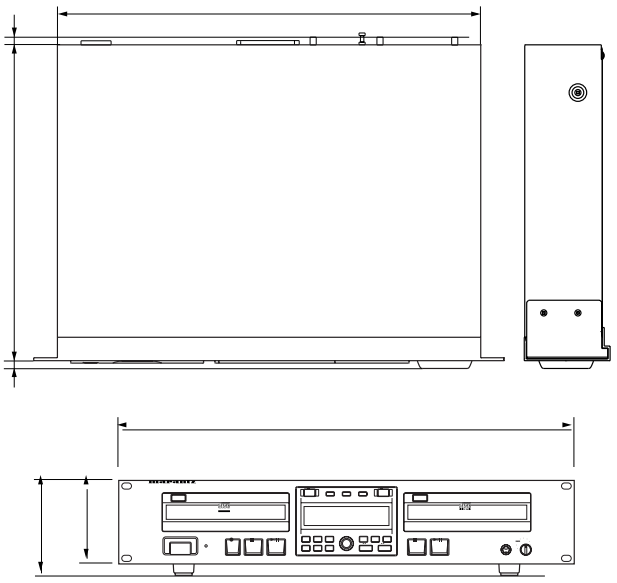
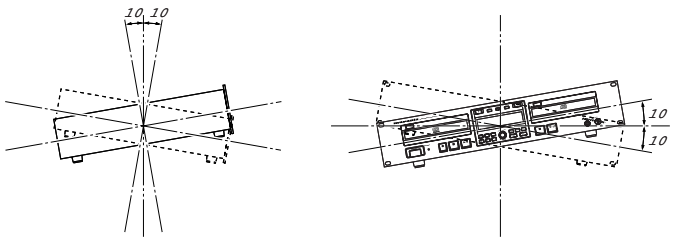
EXTERNAL DIMENSIONS



Cautions of Installation

- Install the player horizontally (or within 10 degrees of level). Too much inclination may result in damage to the player.
- Secure the player at four parts when installing it in a 19-inch rack. (see also figure 3)



TECHNICAL SPECIFICATIONS

GENERAL

System ..... Compact disc digital audio
Number of channels ..... 2 (stereo)
Applicable discs ..... CD,CD-R,CD-RW
Power Requirement ..... AC 100 - 240 V 50/60 Hz
Power Consumption ..... 21 W
Operating Temperature
Dimension (MAX)
Width ..... 483 mm
Height ..... 100 mm
Depth ..... 340 mm
Weight ..... 4.7 Kg

AUDIO

Frequency Response ..... 20 Hz - 20 kHz
CDR OUT
Playback S/N ..... 100 dB
Playback Dynamic Range ..... 96 dB
Payback Total Harmonic Distortion ..... 91 dB
CD OUT
Play back S/N 95dB
Play back Dynamic Range 96dB
Play back Total Harmonic Distortion 85dB
Analog Output Voltage ..... 2.0 Vrms
Analog Recording S/N ..... 96 dB
Analog Recording Dynamic Range ..... 92 dB
Analog Recording Total Harmonic Distortion ..... 88 dB
Digital Coaxial Output ..... 0.5 V (p-p)/75 Ω
Digital Optical Output ..... -20dBm
Headphone ..... 0 - 5 Vrms/ 8 - 2000

Recording values for line input
Digital Coaxial Input (automatic sample rate conversion) ..... 32/44.1/48 kHz (11 kHz - 56 kHz)
Digital Optical Input (automatic sample rate conversion) ..... 32/44.1/48 kHz (11 kHz - 56 kHz)
Digital XLR Input (automatic sample rate conversion) ..... 32/44.1/48 kHz (11 kHz - 56 kHz)
Analog Input Sensitivity (Unbalanced) ..... 500 mVrms/50 k
(Balanced) ..... 0 dBu to + 22 dBu/50 k
(default setting : +16dBu/50 k)

ACCESSORIES
Remote Control Unit RC6050DR 1
AA-size batteries 2
AC power cord 1

Specifications subject to change without prior notice.

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